LIST OF FILES

HOUSE SPECIAL COMMITTEE ON FISHERIES, 2011-2012 (SCOMM 168)

MEMBERS:

REPRESENTATIVE STEVE THOMPSON, CHAIR
REPRESENTATIVE CRAIG JOHNSON, VICE-CHAIR
REPRESENTATIVE ALAN AUSTERMAN
REPRESENTATIVE BOB HERRON
REPRESENTATIVE LANCE PRUITT
REPRESENTATIVE SCOTT KAWASAKI
REPRESENTATIVE BOB MILLER

Established by HR 3, 2011

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2/03/11 Overview: Department of Fish & Game - Division of Sport Fish

2/08/11 Overviews: Department of Fish & Game - Division of Subsistence and Division of Habitat

2/10/11 Overview: Alaska Board of Fisheries

2/15/11 Overview: Sport Fish Sector

2/22/11 Industry Overview: Seafood Processing Sector

2/24/11 Overview: Alaska Commercial Fishing Harvest Sector

3/15/11 Overview: Commercial Fisheries Entry Commission

10/19/11 Presentation: Salmon Management on the Arctic-Yukon-Kuskokwim Region

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HB 20

HOUSE SPECIAL COMMITTEE ON FISHERIES, 2011-2012 (SCOMM 168)
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2/01/11 Overview: Department of Fish & Game - Division of Commercial Fisheries

<TARGET><BILL></BILL><SUBJECT>2-01-11 Overview Department of Fish and Game - Division of Commercial Fisheries</SUBJECT><COMM>HFSH27</COMM></TARGET>

Responses to Representative Austerman's questions from 2/1/11 DCF overview in HFSH

Question 1: What's the story with Karluk sockeye escapements and goals?

1. The early run has been below the escapement goal the last three years (2008 thru 2010). The late run has exceeded the lower bound of the escapement goal in five of the last six years.
    a. Note 1: The department is tracking some lake productivity indicators; we believe that the declines were likely caused (or aided) by overescapements seven to twelve years ago, and that we are seeing signs of recovery in the lake.
    b. Note 2: The department is forecasting more fish in 2011 than in 2010, with a 90% chance that the early run will exceed the escapement goal. (Caveat: Forecasts on Karluk are especially challenging; there are relatively few sibling relationships, as well as uncertainties associated with run reconstructions.)
    c. Note 3: Last year's late-run harvest estimate was 49,000 fish.

Question 2: Smolt monitoring is critical to escapement estimates; why isn't the department requesting funds to monitor smolts on "all' (or "every"?) system? Instead, budget requests in question don't appear to request any funding for smolts.

1. There are very good reasons to monitor smolts; at least three have immediate, direct applicability to management (see #2 below). However, smolt monitoring is not a silver bullet for escapement counting; if there is a silver bullet for escapement counts in the KMA, it is technology to count adults, such as a weir or sonar. In difficult fiscal climates, that's why the department tends to prioritize requests for weirs and/or sonar, at the expense of smolt monitoring. As an example, Westward Research requested a DIDSON (sonar) as its highest priority in the current CIP, with intent to use this for improved escapement monitoring. (Westward is the only DCF region without a DIDSON.)
2. That said, smolt monitoring has been done for decades because it:
    a. Provides data to help develop quality escapement goals, which are the backbone of our management strategy.
    b. In some cases, is the best tool we have for forecasting adult returns.
    c. Allows us to partition mortality into freshwater and marine, thereby helping understand the reasons for a stock that is struggling.
    d. We've aggressively sought funding to beef up smolt monitoring, and were just awarded project funding (AKSSF) to monitor Karluk sockeye smolts for the next three years.
3. In a perfect world, we probably wouldn't monitor smolts on every system; rather, we'd target particular species and systems, with an emphasis on doing a few of these "indicator stocks" very well.

4. Many of the datasets in Westward Region are so robust that a new smolt project likely wouldn't provide data improvement for existing goals.
5. A couple of more Westward Region escapement goal factoids:
   - In 2010, KMA salmon escapements were below the goals for four of the twenty-three stocks:
     - Karluk Chinook and early-run sockeye.
     - American and Olds river coho (DSF stocks that are not managed inseason).

Question 4: What is the status of processing samples for achieving completion of the genetic baseline?

Chinook salmon: We have just completed publication of an analysis of 170 populations from Russia to California (95 from Alaska). This represents more than 80% of our collections, but we have ongoing projects to sample Chinook in various regions (Copper River, Cook Inlet, Nushagak River, Yukon River, and Norton Sound). We have good representation of the major spawning groups, but more work is needed to improve our knowledge and estimates on a finer scale. This baseline is being used for bycatch studies by NOAA and in various Alaska fisheries (Yukon, SE Alaska, Kenai River).

Chum salmon: We have just completed publication of an analysis of populations from Russia to Washington. This baseline is undergoing a major analysis as part of WASSIP, but at the end (3 months from now), we will have 230 populations. We have good representation of the major spawning groups, but more work is needed to improve our estimates on a finer scale and to develop applications. This baseline is expected to be used for bycatch as well.

Sockeye salmon: We have completed analysis of 375 populations from Cape Suckling to Seward Peninsula for use in WASSIP. Another 100+ from Southeast Alaska and British Columbia are completed in the lab, but have not been incorporated. More work is needed to develop the baseline for use in Pacific Salmon Treaty fisheries, and the inclusion of 30 Russian populations will enable work in the Bering Sea and Gulf of Alaska.

Coho and pink salmon: Initial work on baselines has been started, but a lot more work is necessary before we can do much with these species. Funding is currently unavailable for this work, but we have begun to submit proposals for funding. Work on both these species, but especially pink salmon, will help in the fundamental analyses necessary for addressing aquaculture issues.

Overview of the Division of Commercial Fisheries

Sue Aspelund

Acting Director

Division of Commercial Fisheries Mission

Manage, protect, rehabilitate, enhance, and develop the fisheries and aquatic plant resources in the interest of the economy and general well being of the state, consistent with the sustained yield principle and subject to allocations established through public regulatory processes.

Division of Commercial Fisheries Primary Responsibilities

- Manage commercial, personal use, and subsistence fisheries within state waters.
- Manage shellfish species and some groundfish out to 200 miles.
- Conduct applied research on Alaska's aquatic resources.
- Plan and permit salmon hatcheries and mariculture operations.
- Negotiate fishing agreements subject to the Pacific Salmon Treaty and Alaska-Yukon Treaty.
- Coordinate with federal and international fisheries management agencies.

Division of Commercial Fisheries Core Services

- Harvest Management
- Stock Assessment and Applied Research
- Aquaculture Permitting
- Information Services and Public Participation

Harvest Management

- Supporting the Board of Fisheries in establishing regulations and management plans.
- Opening and closing fishing areas and setting fishing times.
- Collecting harvest and biological data.
- Writing annual management reports to synthesize information.





Harvest Management Components

- **Inseason Management**
  - Employ a cadre of fisheries managers proximate to the fisheries.
  - Managers have broad authority to open and close fisheries.
- **Applied Science**
  - To ensure that management of Alaska's fisheries is conducted consistent with the sustained yield principle.

Kuskokwim Bay Salmon Fishermen Delivering in Quinhagak



Crab Boat Setting Pots in the Bering Sea



Stock Assessment and Applied Research

- Salmon Escapement Enumeration:
  - Weirs, Towers, Sonar, Foot/Aerial Surveys
- Juvenile Salmon Estimation
- Groundfish and Shellfish Surveys
- Herring Spawn Deposition and Hydroacoustic Surveys
- Aerial Herring Surveys
- Dive Surveys
- Biological, Genetic, Coded-Wire Tag Sampling

Salmon Enumeration and Sampling









Salmon Enumeration and Sampling







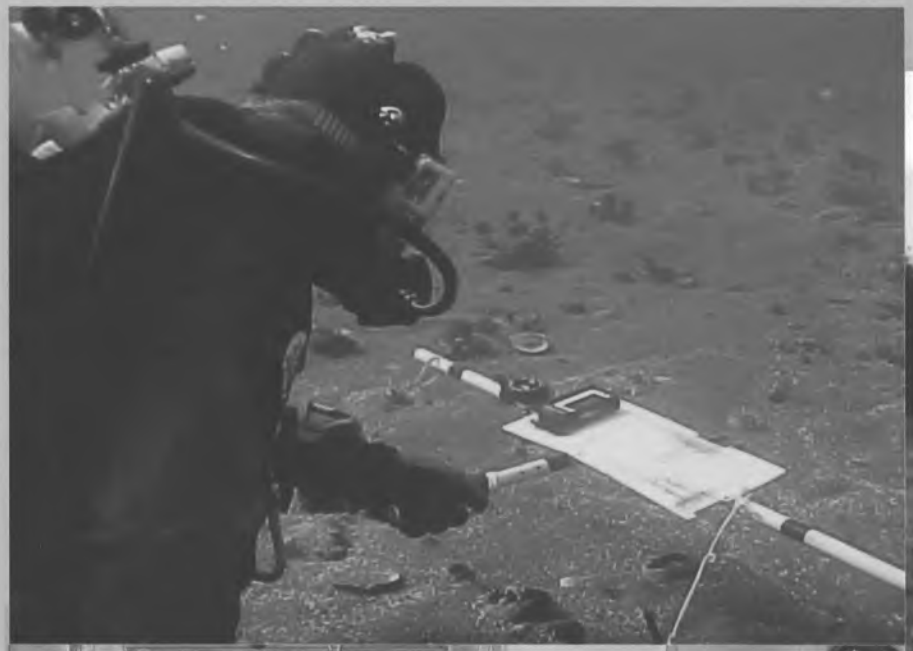


And more...





Other examples of stock assessments...







And yet more...







Aquaculture Permitting



- Private Nonprofit Salmon Hatcheries
- Aquatic Shellfish Hatchery
- Aquatic Shellfish Farms

Information Services and Public Information

- Design and maintain division website
- Publish brochures and other informational materials on divisional programs
- Produce, upon request, custom reports from fish ticket and COAR databases
- Administer divisional confidentiality policies
- Develop and administer divisional publication policies and procedures

Laboratory Services

- Pathology Laboratory
- Coded Wire Tag and Otolith Aging Laboratory
- Genetic Stock Identification Laboratory



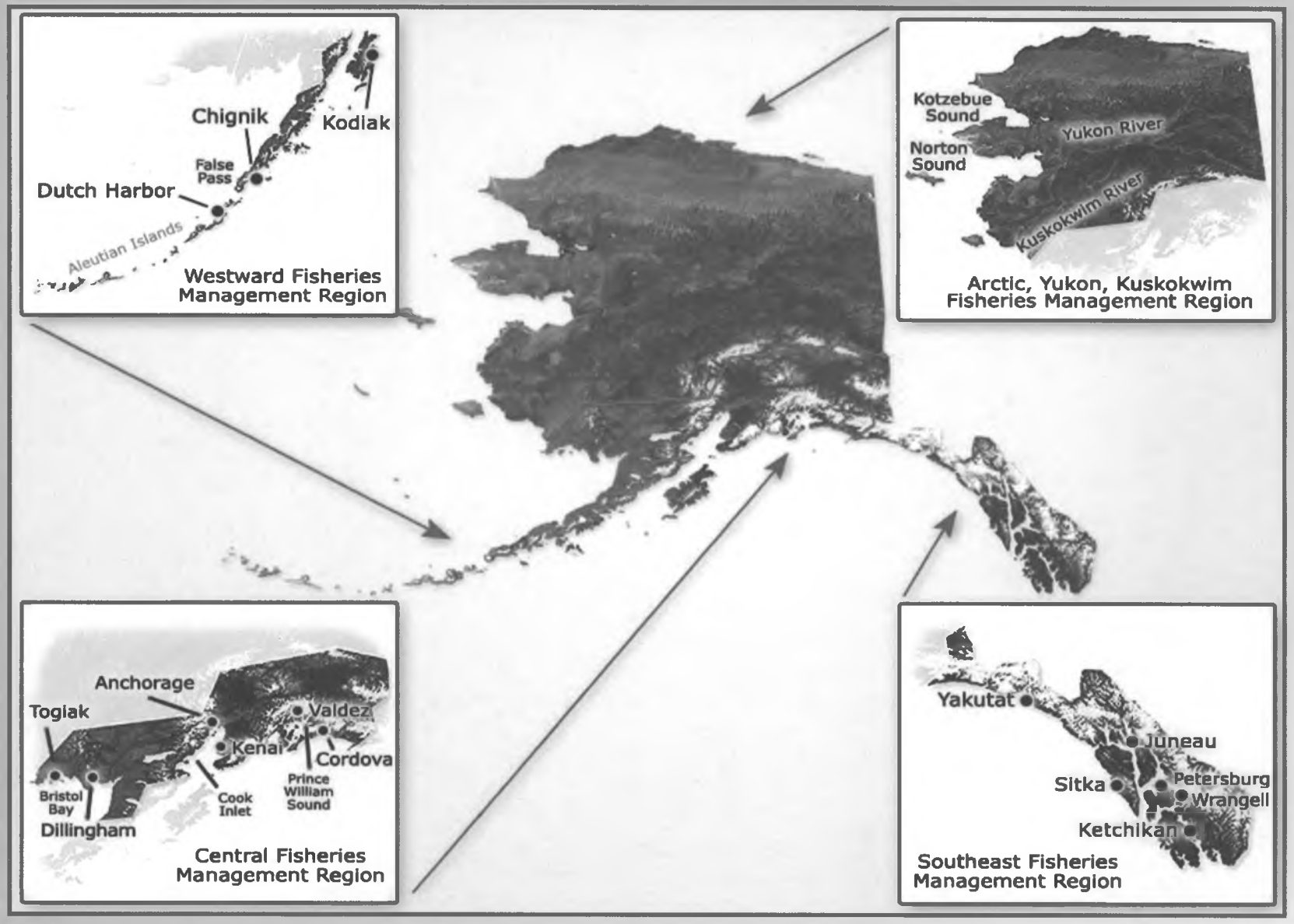
Data Processing

- Fish tickets systems
- eLanding electronic catch reporting system
- Internet-accessible inseason catch and escapement databases
- Geographical Information System databases
- Internet-accessible news release database
- Seafood processor/buyer intent to operate system
- Commercial Operator Annual Reports (COAR)
- Databases for biological data

Organization of the Division

- Southeast Fisheries Management Region - Douglas
- Central Fisheries Management Region - Anchorage
- A-Y-K Fisheries Management Region - Anchorage
- Westward Fisheries Management Region - Kodiak
- Divisional Headquarters - Juneau

Fisheries Management Regions



Permanent and Seasonal Staff



Dive crew aboard the *R/V Kestrel* in 2002.

In FY11:

- **314 permanent staff**
- **450 seasonal staff**
- **20 permanent offices**
- **84 seasonal offices/field camps**
- **6 large research vessels**

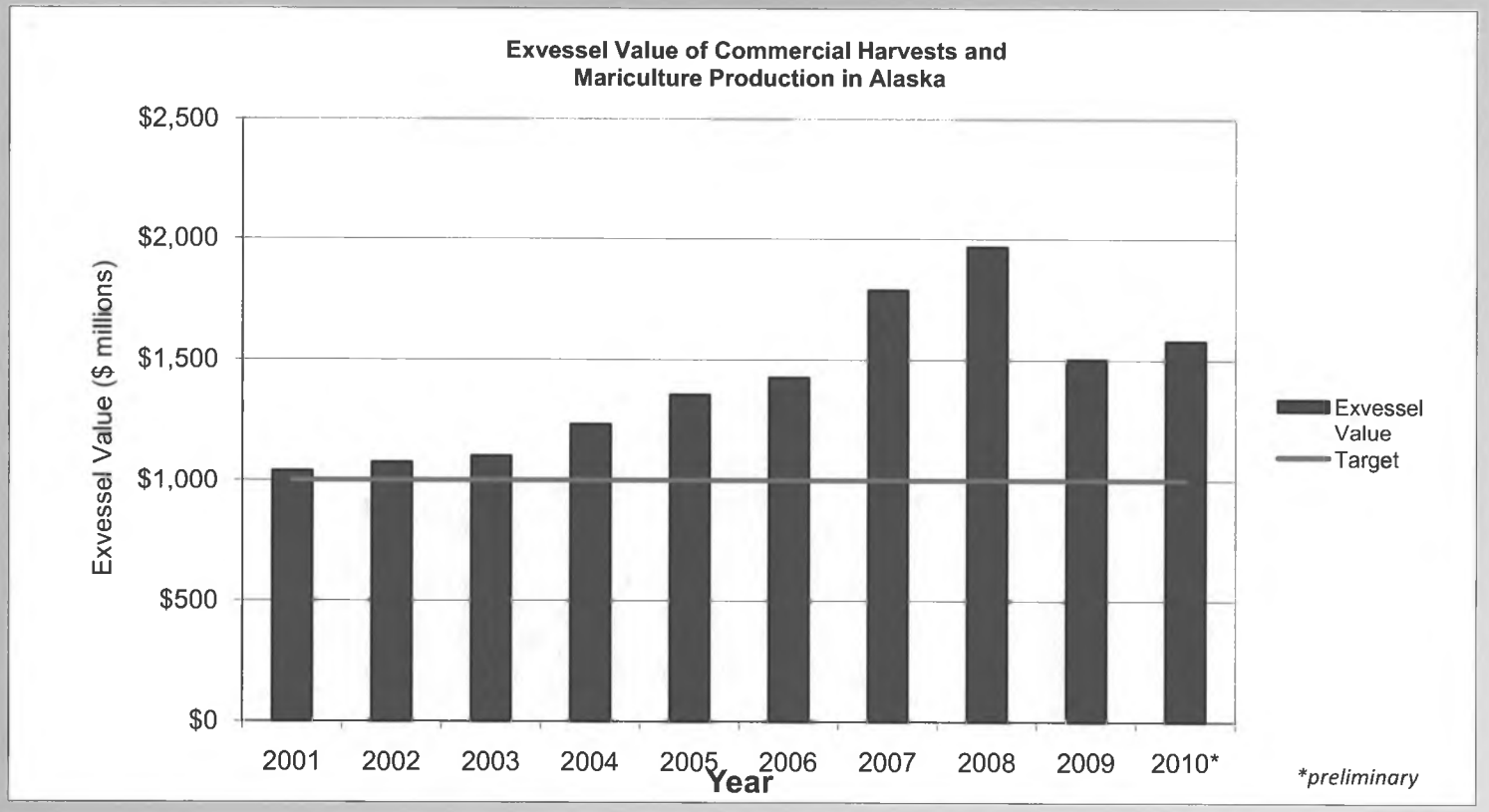
Missions and Measures

Targets

1. Exvessel value of commercial harvests and mariculture production above $1 billion.
2. Achieve salmon escapement goals in 80% of monitored streams.
3. Develop baselines of DNA-based markers for 100 Alaska salmon stocks for sockeye, chum, and Chinook salmon.
4. Ensure 100% of active aquatic farms operate under terms of current permits.

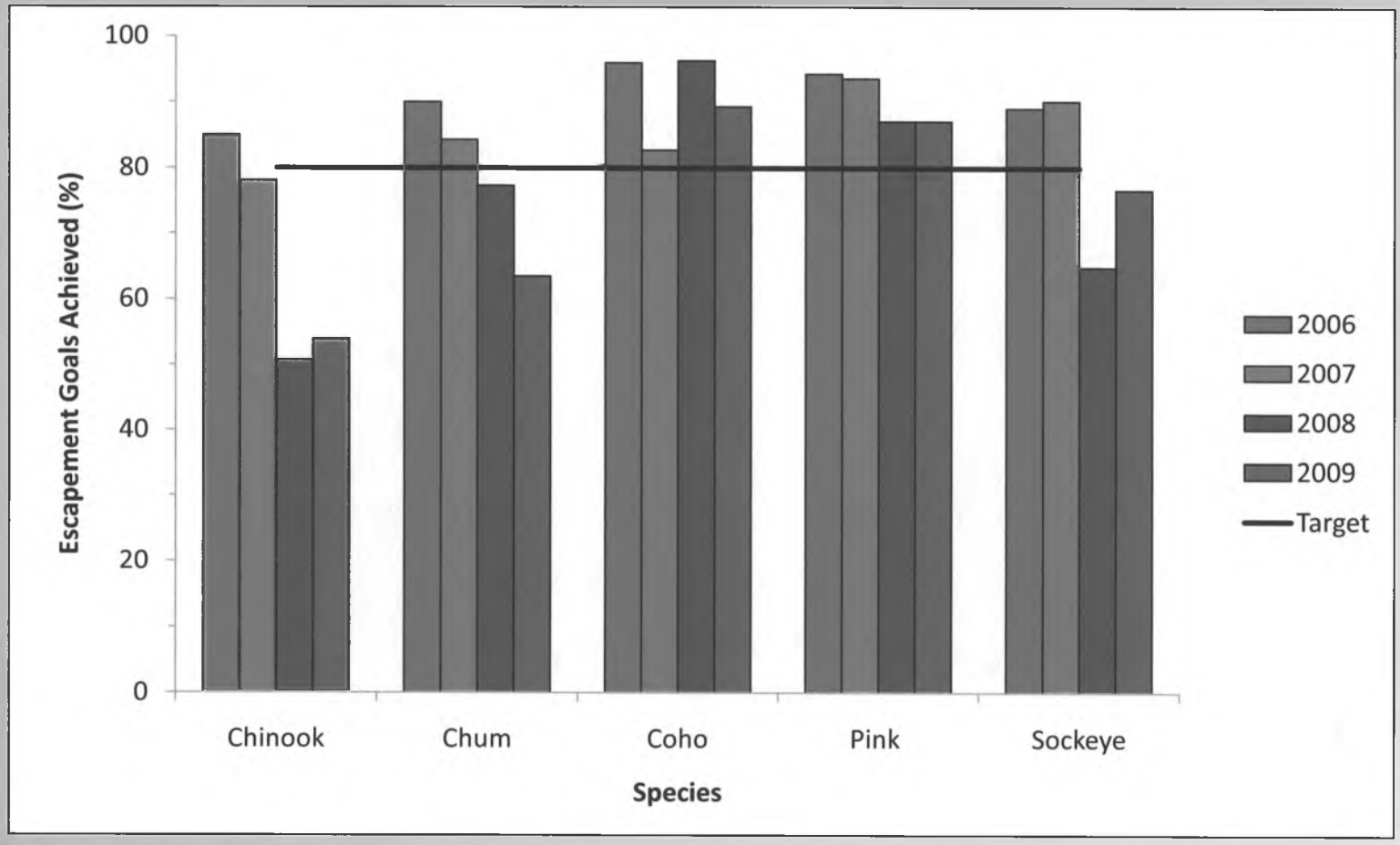
Missions and Measures

1. **Exvessel value of commercial harvests and mariculture production above $1 billion annually.**



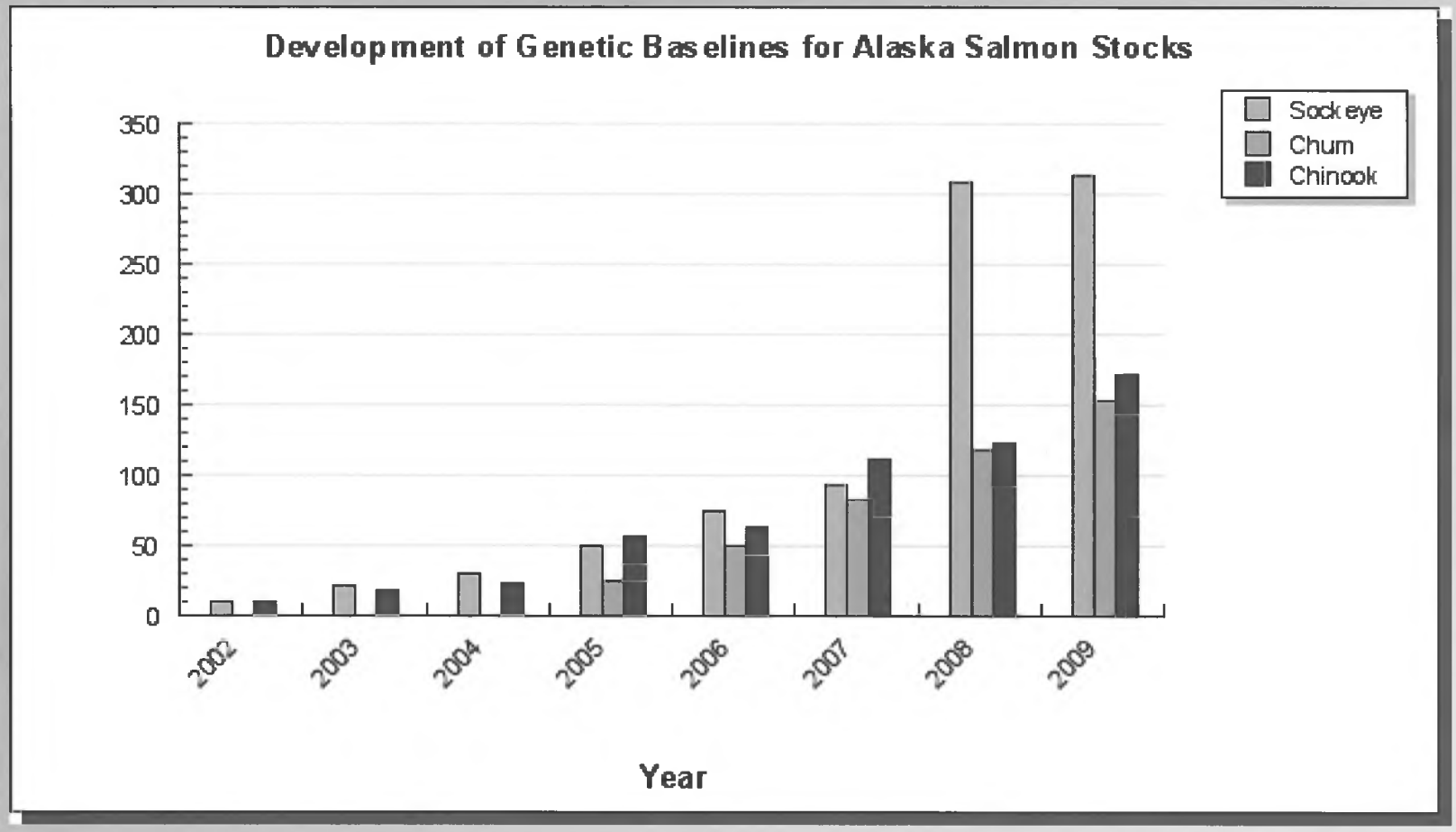
Missions and Measures

2. **Achieve escapement goals for more than 80% of monitored stocks.**



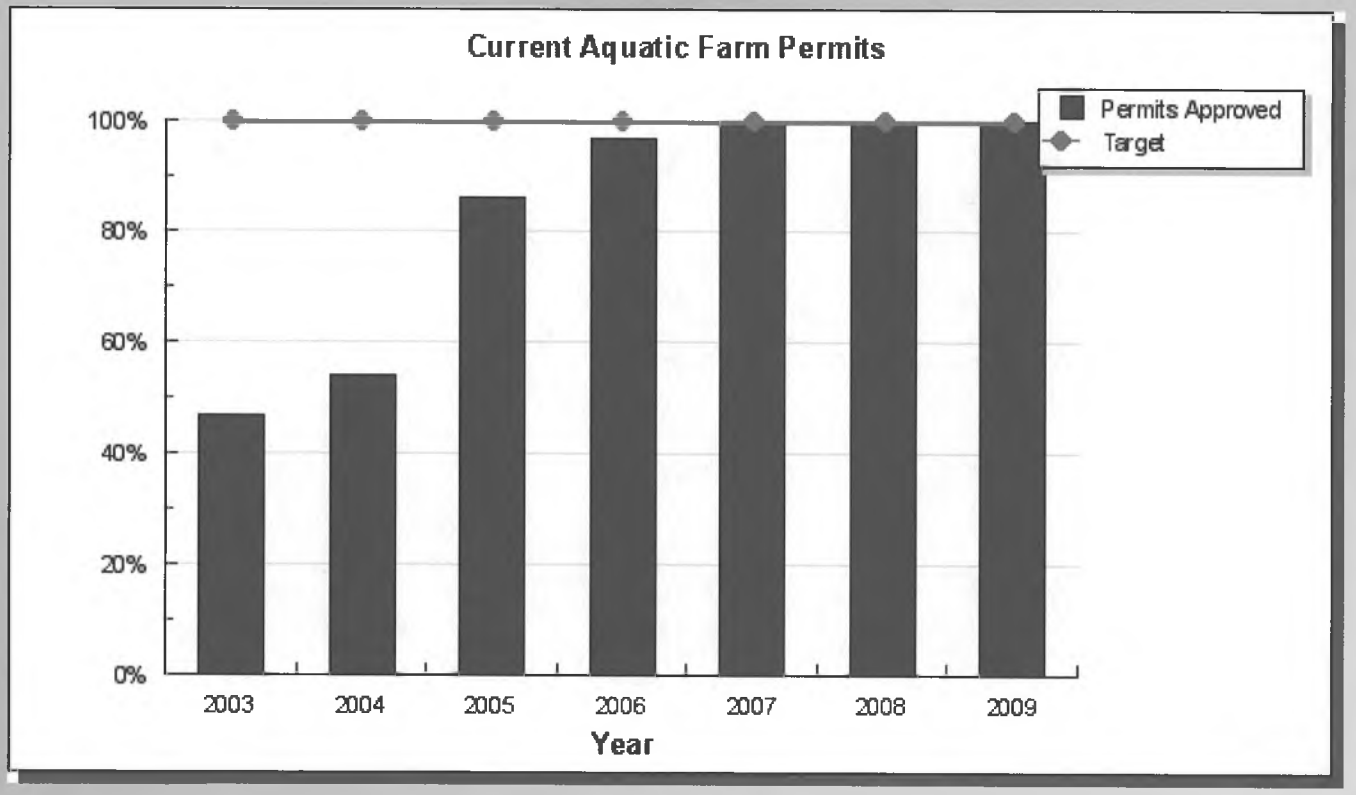
Missions and Measures

3. Develop genetic baselines for Alaskan Chinook, chum, and sockeye stocks that will include 100 stocks in each baseline.



Missions and Measures

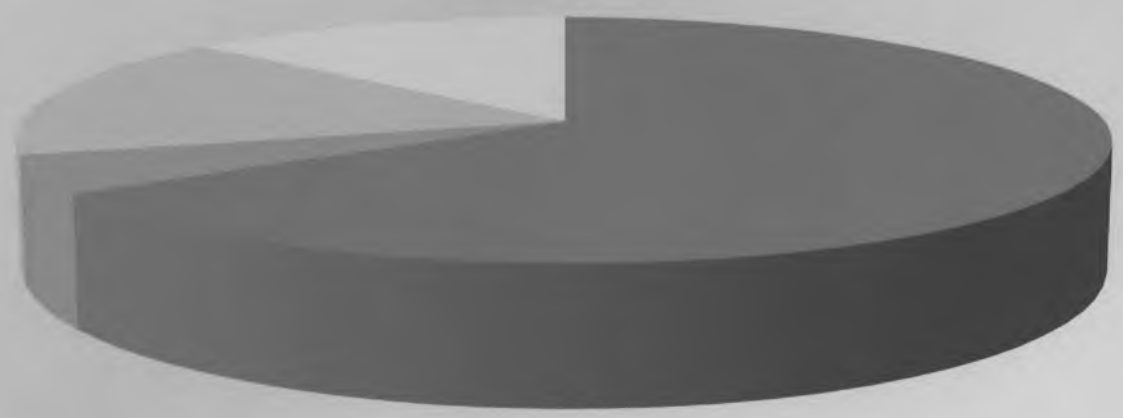
4. **All aquatic farms operating with current permits.**



FY12 Budget Request

Total Request = $66,159.7

(in thousands)



- Unrestricted GF (65.4%)
- Designated GF (5.0%)
- Federal (16.3%)
- Other Sources (13%)

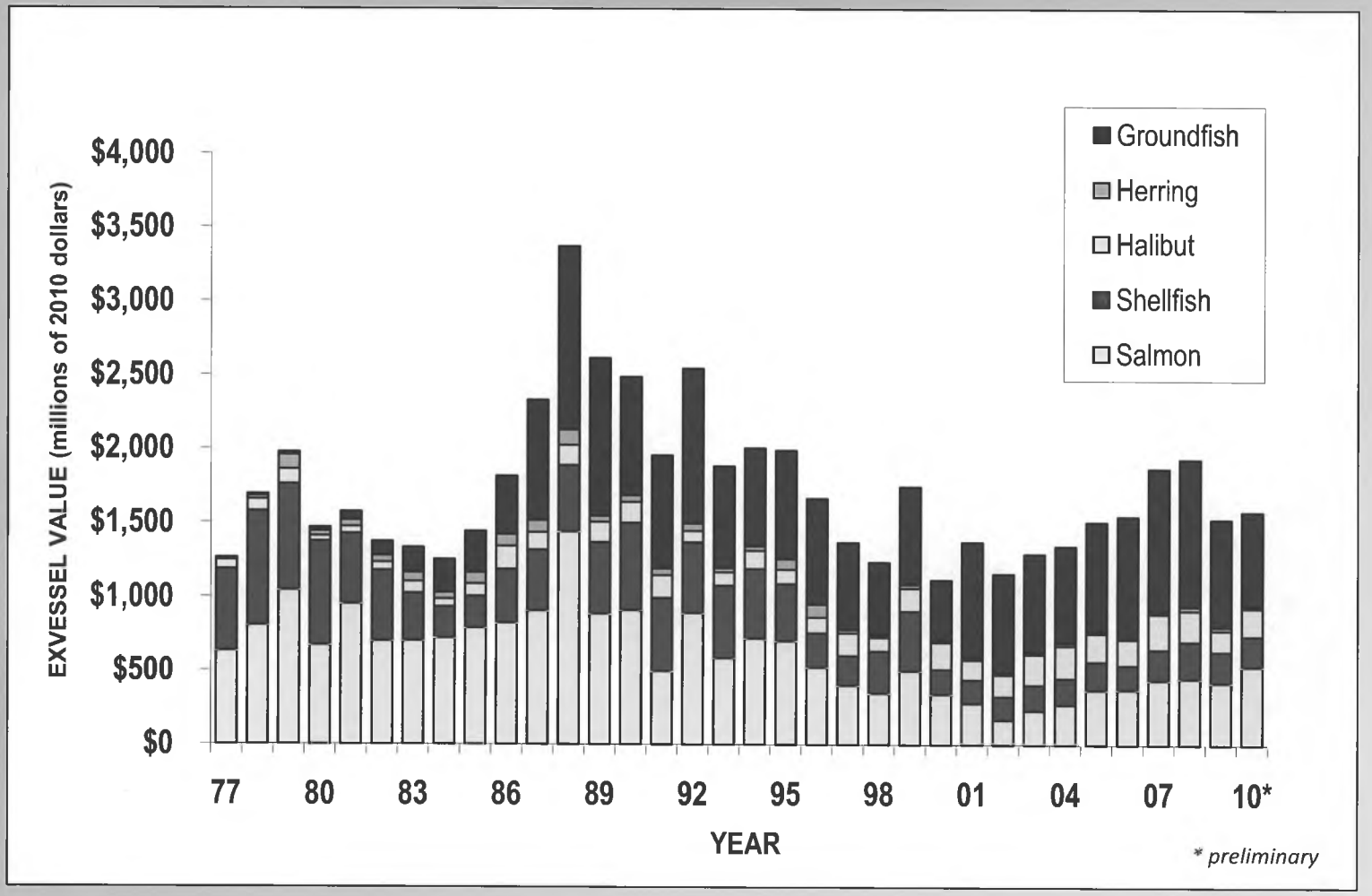
Economic Impact of Seafood Industry on Alaska's Economy in 2007

(Source: Northern Economics, Inc. 2009)

- **Generated 78,519 jobs employed in seafood harvesting, processing sectors, and support industries.**
- **Approximately 48,467 of these jobs were held by Alaskans.**
- **Generated $774.7 million in direct payments to labor with $237 million going to Alaska residents.**
- **Generated total sales of $3.6 billion within Alaska.**
- **Paid more in taxes to state general fund than any other industry except oil and gas.**

Exvessel Value of Alaska's Commercial Fisheries

(Adjusted to 2010 Dollars)




Thank you!
Questions?

2/03/11 Overview: Department of Fish & Game - Division of Sport Fish

<TARGET><BILL></BILL><SUBJECT>2-03-11 Overview Department of Fish and Game - Division of Sport Fish</SUBJECT><COMM>HFSH27</COMM></TARGET>

ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF SPORT FISH

FY12 Division Overview

The mission of the Division of Sport Fish is ***to protect and improve the state's recreational fisheries resources.*** Services provided are founded on this mission, and addressed in the following seven core services:

Fishery Management: The division ensures the sustained use of Alaska's recreational fisheries while optimizing social and economic benefits.

Fishery Research: The division promotes excellence in fisheries research.

Fisheries Enhancement: The division diversifies recreational fishing opportunities via supplemental production of hatchery-reared fish.

Angler Access: The division protects and improves public access to recreational fisheries resources.

Information and Education Services: The division informs and educates the public about recreational fishing with an emphasis on exceptional customer service.

Fish Habitat: The division conserves habitat to sustain recreational fisheries resources.

Workforce Support: The division provides exceptional support to our workforce to attain the division's vision and goals.

The division measures success in meeting its mission by assessing the outcome of ***"sustain recreational fishing opportunities while optimizing social and economic benefits"*** using the following targets:

- Target 1: Sell 450,000 sport fishing license annually.
- Target 2: Maintain 2.5 million angler days of recreational fishing effort annually.
- Target 3: Maintain a positive trend in sport fishing trip-related expenditures.
- Target 4: Maintain at least 75% of anglers satisfied with their sport fishing experience.

Challenges that currently impact the division's ability to achieve its mission include:

- Maintaining existing hatchery production while constructing new hatchery facilities, and identifying and securing hatchery operational funds;

- Sustaining wild fish stocks by employing stock assessment research and managing sport fishery harvests according to the Sustainable Salmon Fisheries Management Policy (5 AAC 39.222); Salmon Escapement Goal Policy (5 AAC 39.223); and the Policy For the Management Of Sustainable Wild Trout Fisheries (5 AAC 75.222);

- Continuing to refine and improve accuracy of Fish and Game and Dingell-Johnson fund projections while balancing increased project and operational costs;

- Improving resident angler satisfaction, diversity of fishing opportunities and modernize harvest data collection methods;

- Ensuring public access and minimizing impacts to recreational users as lands are conveyed or restricted by federal managers or federal subsistence regulations; and

- Improving current and/or developing new approaches to better inform and educate the public about sport fishing opportunities and regulations, and division programs and activities related to sport fishing.

The total FY12 Governor's Request for the division's RDU is **$48,389,500**, representing a decrease from FY11 Management Plan of **($858,500).** Changes from FY11 Management Plan to FY12 Governor's Request include:

FY11 OMB Correction, GGU/SU Salary Adj Overstated	($334.0)
FY12 COLA, Health, and Geographic Differential Increases	$1,191.4
Increase I/A Receipt Authority	$100.0
Reverse August FY11 Fuel Increase	($15.9)
Transfer and Decrement Excess SDPR Authority	($300.0)
Decrement Excess Fish & Game Fund Authority	($1,500.0)
	($858.5)

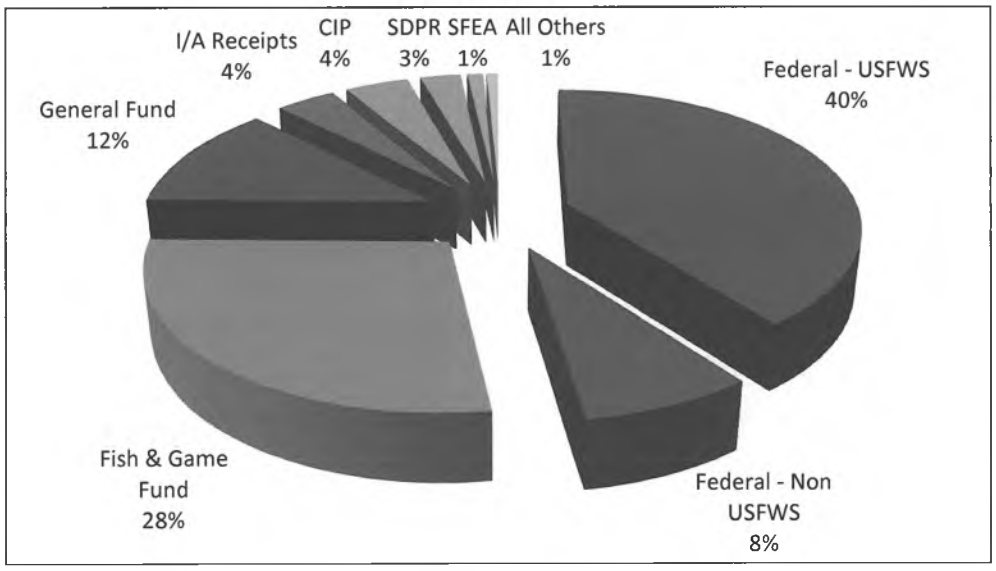
The division has one component, Sport Fisheries. The division employs 231 permanent full time positions and 204 permanent part time positions.

The division maintains a headquarters office in Juneau; regional offices in Anchorage, Douglas, and Fairbanks; and 22 management area offices, including Sitka, Ketchikan, Yakutat, Haines, Craig/Klawock, Petersburg, Palmer, Soldotna, Homer, Kodiak, Dillingham, Cordova, King Salmon, Seward, Bethel, Delta Junction, Tok, Nome, and Glennallen.

The RDU receives funding from numerous sources:

- **Federal Receipts:** from the USFWS Wildlife and Sport Fish Restoration Program.
- **Federal – Non USFWS:** comprised of Federal Subsistence, Pacific Salmon Treaty LOA, grants from NOAA, EPA, BLM, and other federal agencies.
- **Fish and Game Fund:** derived primarily from the sale of state fishing licenses, king salmon tags, and sport fishing operator and guide license fees.
- **Interagency Receipts:** comprised of Reimbursable Services Agreements from various state agencies.
- **General Funds:** state general funds.
- **CIP Receipts:** personnel costs associated with projects funded under CIP grants (such as the Alaska Sustainable Salmon Fund).
- **Statutory Designated Program Receipts:** receipts from non-governmental entities.
- **Sport Fish Enterprise Account:** derived from the surcharge on sport fishing licenses legislatively established to pay for two new hatcheries.

FY12 Governor's Budget by Funding Source

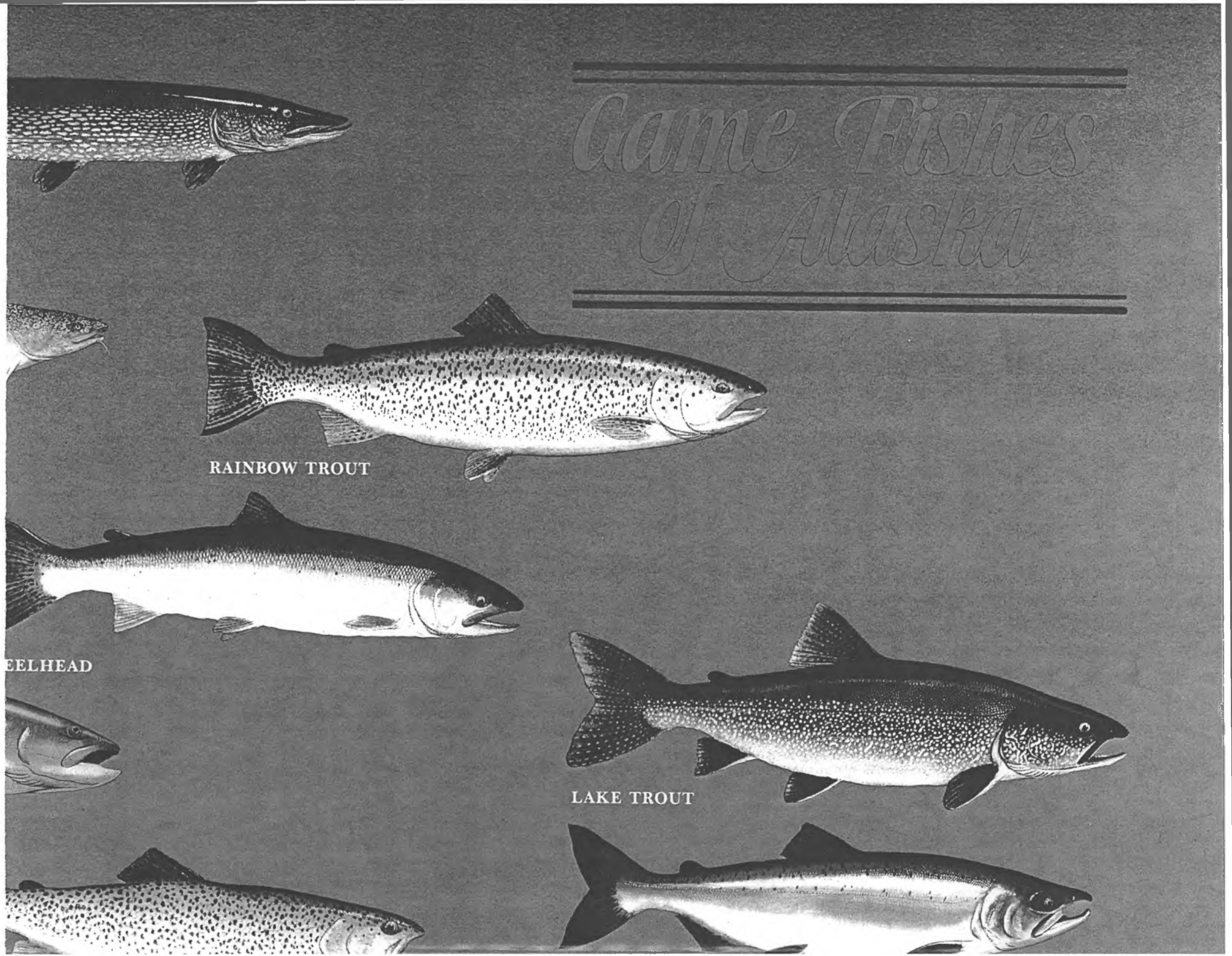


FY12 Capital Budget

Sport Fish Recreational Boating Access $3,000.0 ($2,250.0 Federal Receipts; $750.0 F&G Fund) Federal regulations prescribe that 15% of the annual Sport Fish Restoration (Dingell-Johnson) Fund apportionment will be dedicated to projects that benefit recreational power boaters (Wallop-Breaux amendment). Projects include: boat launches, mooring floats, parking lots, restrooms, fish cleaning facilities, and other services.

THE FOLLOWING DOCUMENT HAS NOT BEEN FILMED BUT IS AVAILABLE IN THE ORIGINAL FILE:

Game Fishes of Alaska (poster)


Game Fishes
of Alaska
RAINBOW TROUT
EELHEAD
LAKE TROUT

2/08/11 Overviews: Department of Fish & Game - Division of Subsistence and Division of Habitat

<TARGET><BILL></BILL><SUBJECT>2-08-11 Overviews Department of Fish and Game - Division of Subsistence and Division of Habitat</SUBJECT><COMM>HFSH27</COMM></TARGET>

ADF&G Division of Subsistence 2011 Update



Fish wheels at Chitina, 2010.

Presented by
Jim Simon,
Acting Director,
February 2011

Division History

- 1978 creation by statute AS 16.05.090
  - Duties (7) are found in AS 16.05.094.
- 1980 federal passage of ANILCA.
  - Rural residents given priority.
  - 1989 Alaska Supreme Court ruled this a violation of Alaska Constitution.
- AS 16.05.258 Subsistence use and allocation of fish and game.
  - 1986 passage.
  - 1992 passage.



Alaska State Library - Historical Collections

Division Mission

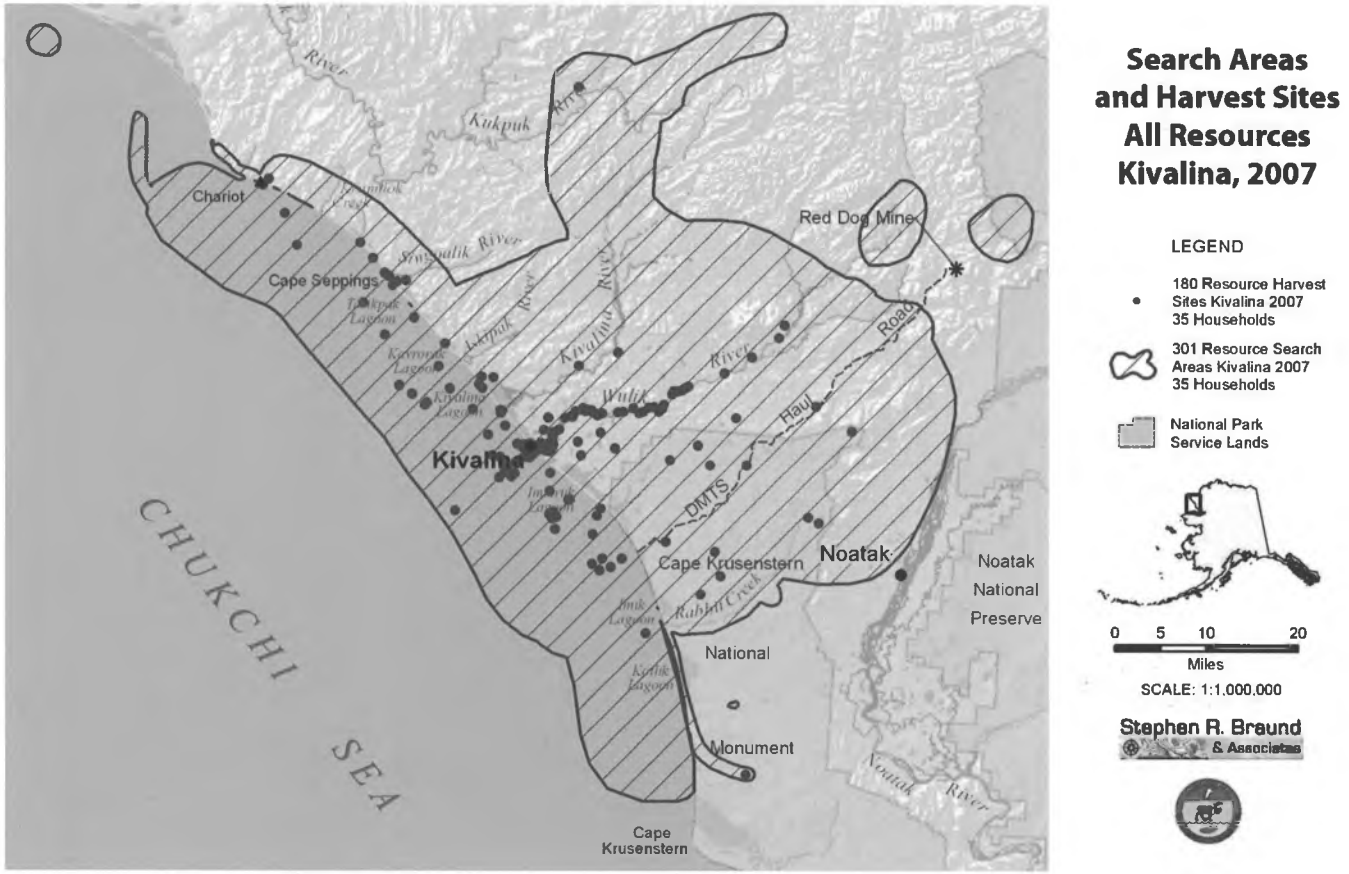
- To scientifically quantify, evaluate, and report information about customary and traditional uses of Alaska's fish and wildlife resources.
  - Systematic human dimensions research:
    - Systematic data collection methods, data analysis, and reporting.
  - High ethical standards :
    - Tribal consultation policies,
    - Extensive community involvement,
    - Confidentiality.



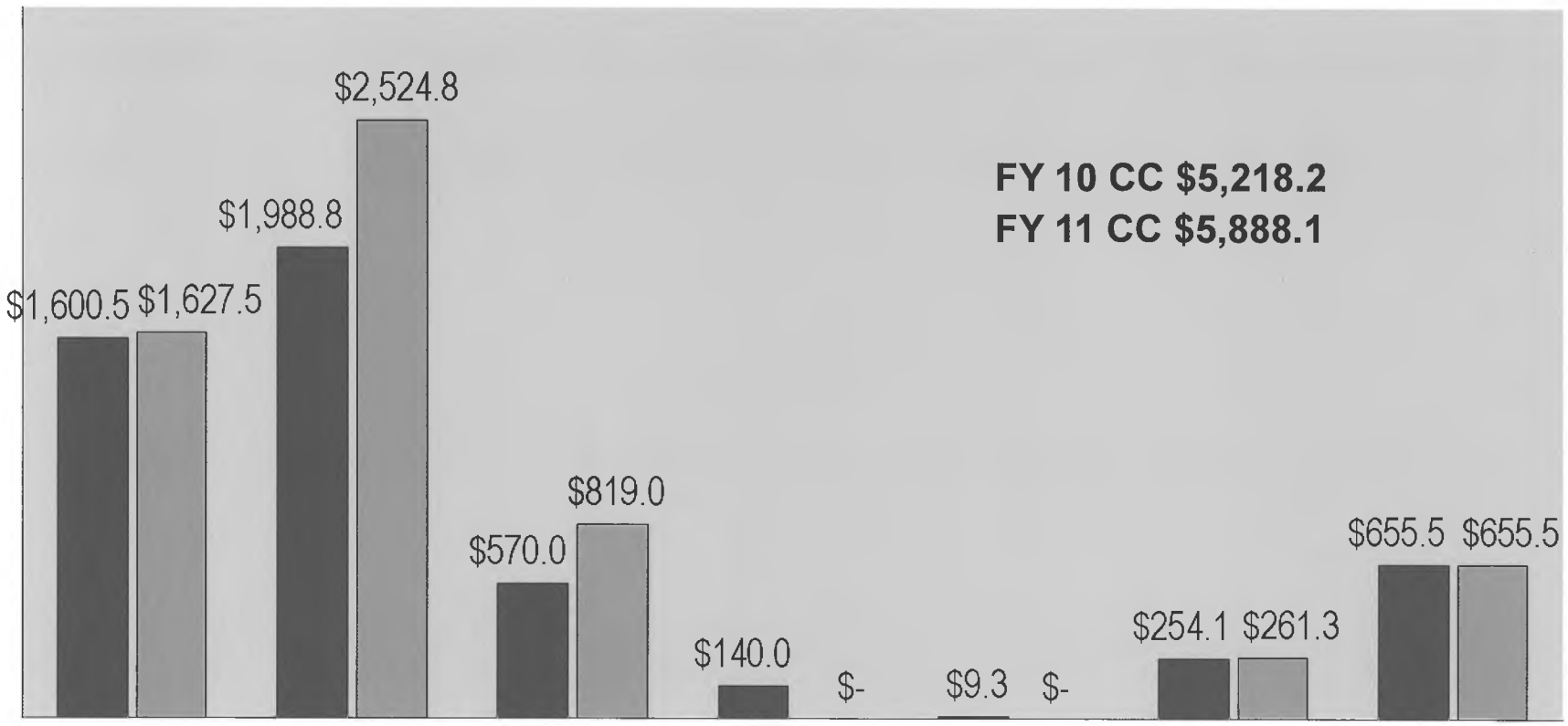
Getting a fish trap ready, Holy Cross, 2004.

Division Core Services

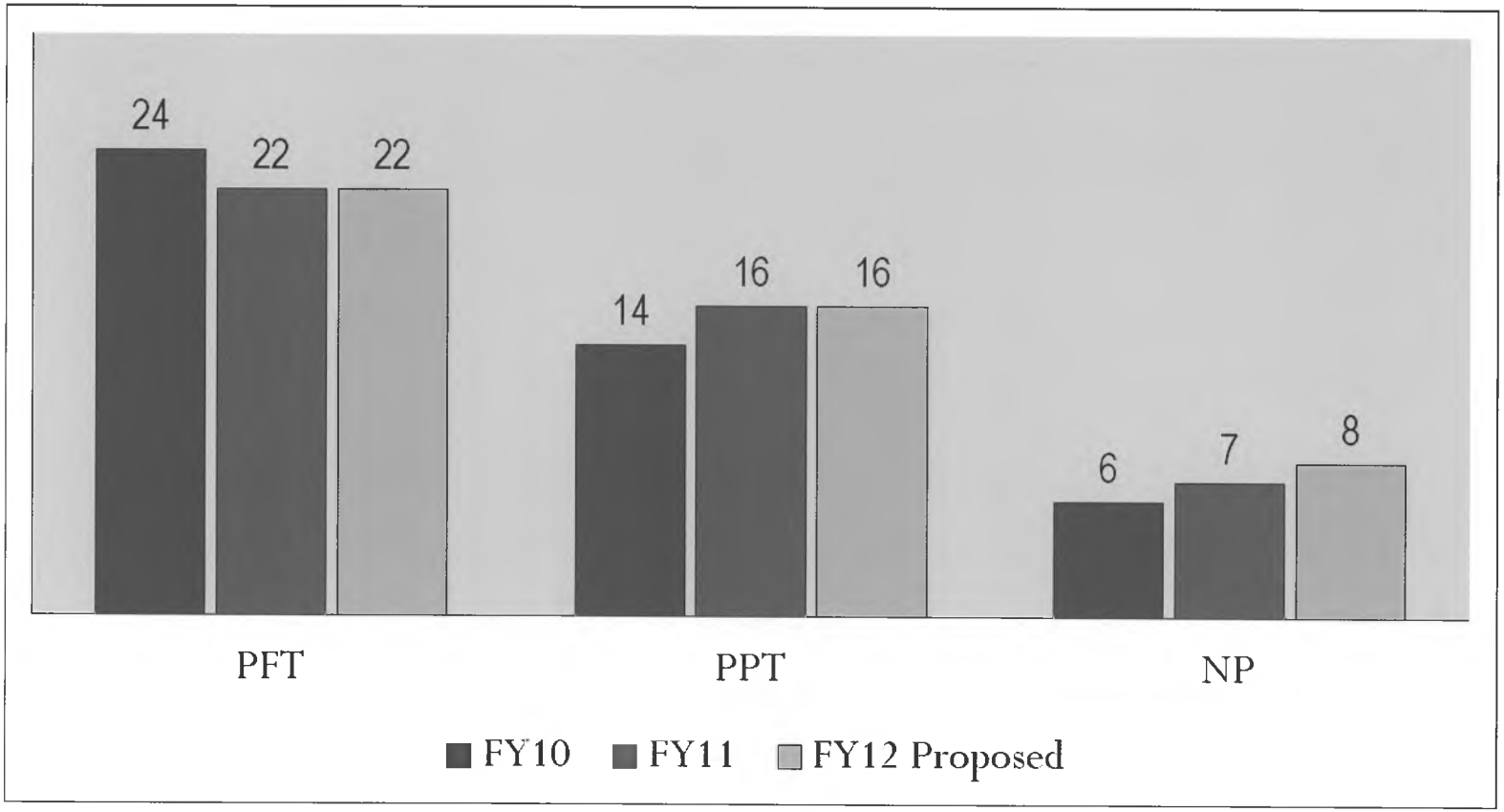
- Research and publish.
- Provide information for implementing the Alaska subsistence law.



FY10 and FY 11 Authority



Division Staffing Levels



- Office locations in Juneau, Anchorage, Fairbanks, Dillingham, Bethel, Kotzebue.

Research Update



A successful moose hunt, Chalkyitsik, Alaska, 2009.

Target: conduct a minimum 5 studies in at least 3 of 6 regions at a 5-year average.

- In FY10, 15 community surveys were completed, below the target of 26 communities (5-yr avg) due to ongoing multi-year research; this target has been met 3 of the past 5 years.
- Targets were exceeded in 2 of 6 regions, below overall target.

Publishing Update

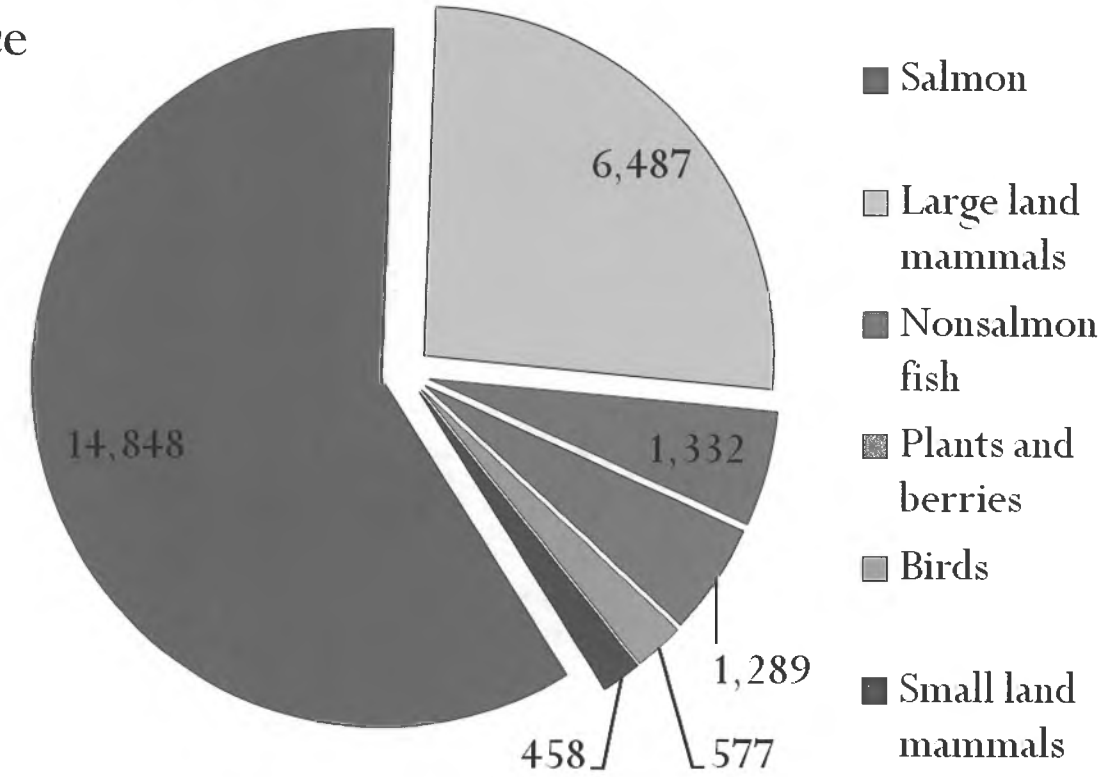


Division's Technical Papers are posted to the Division website and sent to the Alaska State Library and to the ARLIS Library.

- In FY10, the division completed and released 30 new technical reports and materials for the general public.

Publishing Update

- Community Subsistence Information System (CSIS) database.
- www.subsistence.adfg.state.ak.us/CSIS.
- 64 communities updated in FY10.



Wild resources, pounds harvested, Lime Village, 2007.

Regulatory Support FY10

- 252 Board of Fisheries and Board of Game proposals reviewed for impacts to customary and traditional uses.
- 31 management plans – fisheries and wildlife – were informed with information about customary and traditional uses.
- All meetings of the Alaska Board of Fish (8) and Alaska Board of Game (4) attended.
- 13 Special Publications, deliberation materials, and oral reports developed for these processes.



Northern pike freeze-drying in Emmonak, 2009.

Key Accomplishments

- Yukon River Chinook Salmon Disaster Research.
- Index Community Program Development.
- Reopened Subsistence Division's Bethel Field Office.



Local surveyors attend orientation session, Kiana, 2003.

Thank You



Berry picking near Nondalton, 2008.

DIVISION OF HABITAT

Overview and Performance Measures



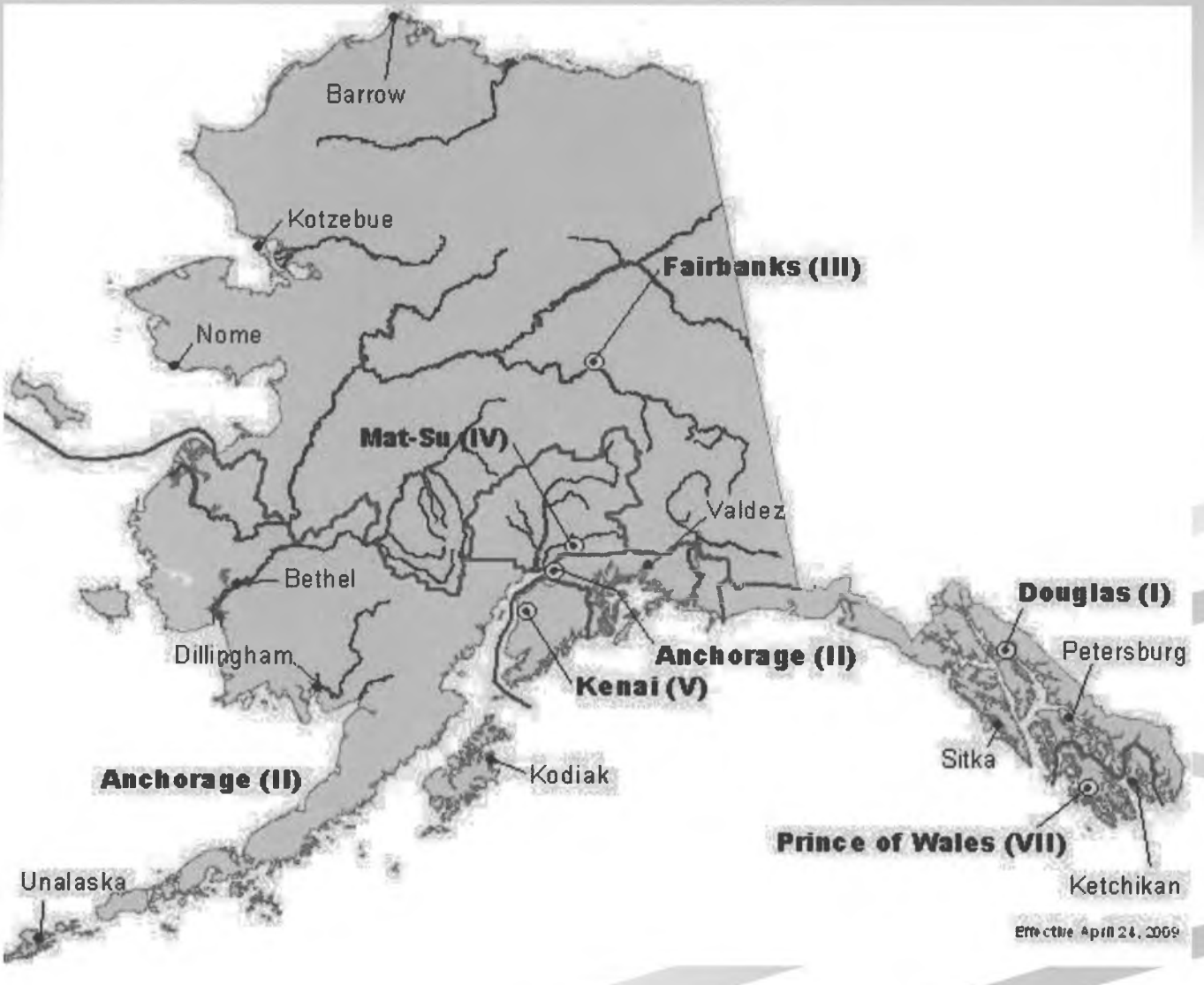
Kerry Howard, Director

Division History

- Anadromous fish habitat and fish passage responsibilities legislated shortly after statehood.
- Over the years, 32 refuges, critical habitat areas and sanctuaries were also established.
- Functions initially distributed throughout Department.
- "Sections" created in Sport Fish (Access Section), Comm. Fish (Water Rights), and Game Divisions (Lands).
- About 1969 or 1970, the above sections were consolidated into the "Habitat Section".
- Division responsibilities expanded in late 70s-early 80s when state and federal planning efforts escalated.
- Habitat granted "Division" status in 1981.
- In 2003, Habitat was moved to DNR, and renamed the "Office of Habitat Management and Permitting." The division also sustained an 18% reduction in staff and an 11% reduction in budget.
- In 2008, Habitat was moved back to ADF&G, and re-established as the "Habitat Division".
- The Division currently has 49 positions, 3 Regional Offices, and 3 Area Offices.

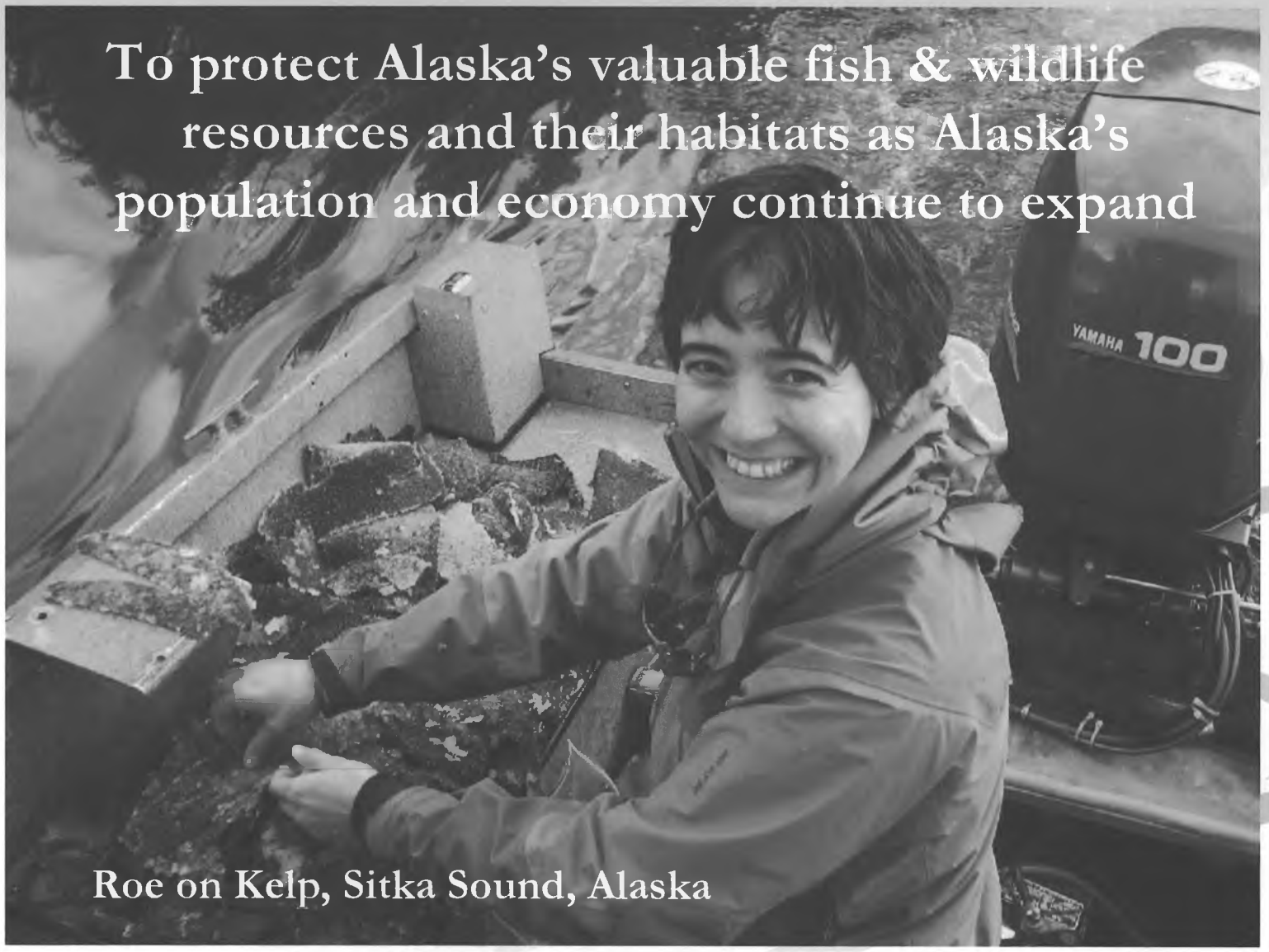


Sockeye Salmon, Steep Creek, Juneau



- Habitat Offices in Fairbanks, Palmer, Anchorage, Soldotna, Juneau, Craig
- 47 PFT; 2 PPT

Division Mission Statement



Statutory Authorities

- AS 16.05.841
  Fish Passage

- AS 16.05.871
  Fish Habitat

- AS 16.20
  Legislatively Designated Special Areas



McNeil River State Game Sanctuary

Habitat's Core Services

- Review applications and issue permits for activities in anadromous waterbodies and fish-bearing waters and legislatively designated Special Areas (Title 16); provide expertise to protect important fish and wildlife habitat; monitor authorized projects and conduct compliance actions.
- Maintain and revise the Catalog of Waters Important for the Spawning, Rearing, or Migration of Anadromous Fishes.
- Manage Alaska's Special Areas in accordance with legislative guidelines; prepare and update management plans for these areas.
- Review proposed timber harvest activities; conduct field inspections; work cooperatively with timber operators and other governmental agencies.
- Review development projects (e.g., oil and gas, hard-rock mining, roads, T16 elements of hydropower projects) authorized under other agencies' authorities.
- Conduct applied research to develop methods and means to minimize impacts of development projects on fish and wildlife resources.

End Result: Protect Alaska's valuable fish and wildlife resources and their habitats during resource development activities.

Target #1: 100% of resource developers meet agency requirements for protection of fish, wildlife, and their habitats.

Status #1: In FY10, 99.6% of all developers were in compliance with issued Fish Habitat and Special Area permits, just short of the performance target.



Stream revetment and pipeline

Strategy A1 - Enhance our Fish Habitat and Special Area review processes by reviewing projects in a timely manner, adding appropriate conditions to protect resources, and monitoring, as needed.



Culvert Installation

Target #1: 8.2-day average permit review timeframe for Fish Habitat Permits

Status #1: In FY10, Fish Habitat permits were reviewed and issued in an average of 9.1 days, statewide, almost meeting the performance target.

Strategy A1, cont.

Target #2: 100% of Fish Habitat permit applications received are reviewed and acted on by either: 1) approving as proposed; 2) approving after modification with appropriate conditions to protect resources; or 3) denying if resources could not be protected.

Status #2: In FY10, 100% of Fish Habitat permits were reviewed and completed, meeting the target.



Kizuchia Creek

Strategy A1, cont.



McNeil River Falls

Target #3: 15-day average permit review time for Special Area permits.

Status #3: In FY10 Special Area permits were reviewed and issued in an average of 12.4 days, statewide, exceeding the 15-day average permit review time performance target.

Strategy A1, cont.

Target #4: 100% of Special Area Permit applications received are reviewed and acted on by either : 1) approving as proposed; 2) approving after modification with appropriate conditions to protect resources; or 3) denying if resources could not be protected.

Status #4: In FY10, 100% of Special Area permits were reviewed and completed, meeting the performance target.



Bald Eagle, McNeil River State Game Sanctuary

Strategy A2 - Actively and timely participate in coordinated project reviews to ensure appropriate protection of important habitats.



Wetlands construction

Target #1: 11.5-day average timeframe for a coordinated project review.

Status #1: In FY 10, coordinated project reviews were completed in an average of 12.9 days, statewide, just short of the 11.5-day average timeframe for a coordinated project review performance target.

Strategy A2, cont.

Target #2: 93.2% of projects in a coordinated process are reviewed to ensure appropriate protection of important habitat.

Status #2: In FY10, 92.2% projects in a coordinated process were reviewed to ensure appropriate protection of important habitat, almost meeting the performance target to review 93.2% of projects in a coordinated process.



Stream enhancement project, Harris River, POW Island

Strategy A3: Continue to actively manage legislatively designated Special Areas by developing and updating management plans.

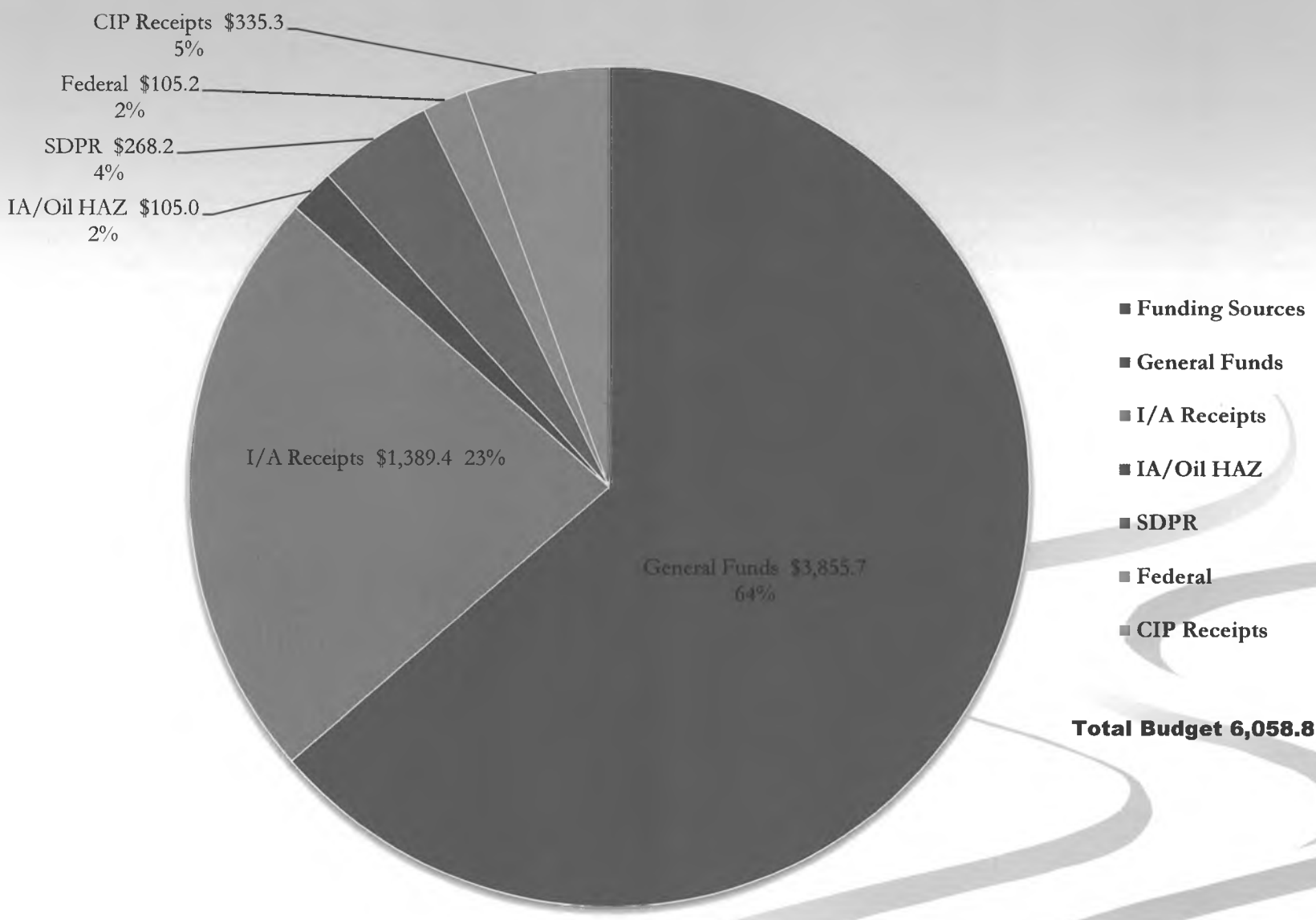


Mendenhall Wetlands State Game Refuge

Target #1: One Special Area management plan completed or revised each fiscal year.

Status #1: No new Special Area management plans were completed in FY10; target not met.

FY 12 Proposed Authority



Total Budget 6,058.8


Questions?

2/10/11 Overview: Alaska Board of Fisheries

<TARGET><BILL></BILL><SUBJECT>2-10-11 Overview Alaska Board of Fisheries</SUBJECT><COMM>HFSH27</COMM></TARGET>

An Overview of the Alaska Board of Fisheries Process

February 2011

Jim Marcotte
Executive Director, Alaska Board of Fisheries
Boards Support Section, Alaska Dept. Fish and Game
907-465-4110
website: http://www.boards.adfg.state.ak.us/
email: jim.marcotte@alaska.gov

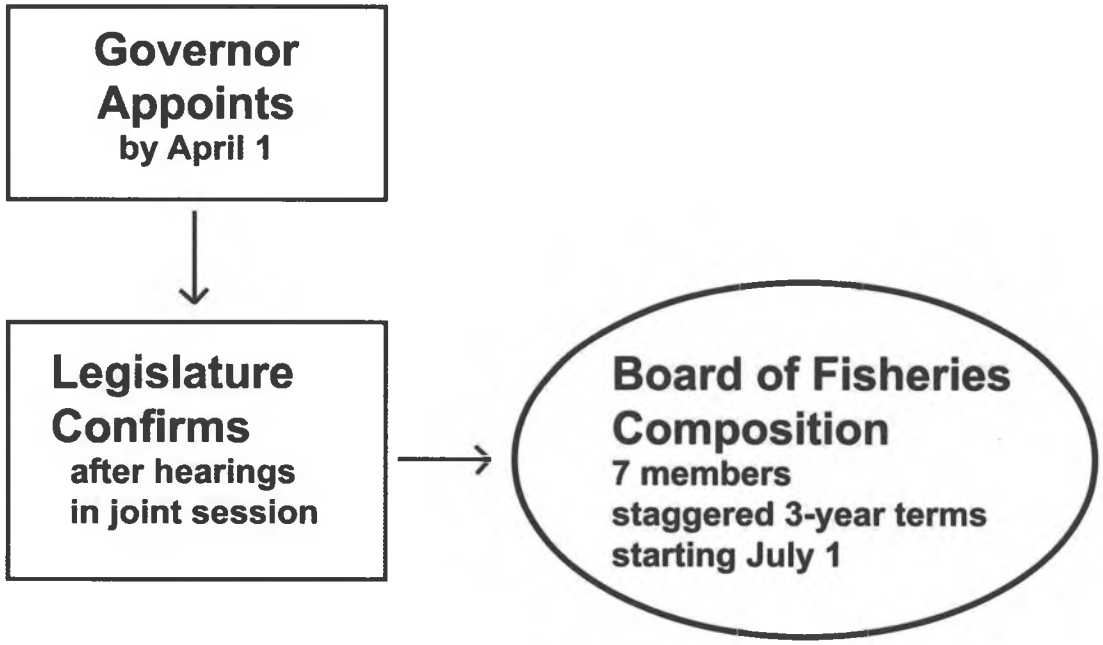
Main function of the Board: Allocation

"The third element of Alaska's fisheries management model is the Alaska Board of Fisheries, which is a citizen-based organization that makes decisions on the allocation of fisheries resources. The Board members, who are appointed by the Governor and confirmed by the legislature, represent a broad array of fishing groups and other interests. By taking on the task of resolving fishery disputes, the Board takes the politically-charged issue of allocation away from the fishery managers and politicians. While this system is not without its flaws, it dramatically increased the credibility of the management program by effectively separating decisions regarding allocation from those related to conservation. The separation of allocation and conservation decisions is critical for achieving sustainable fisheries in the state and elsewhere in the Northwest."

(excerpt from: *The Elements of Alaska's Sustainable Fisheries*, by Fran Ulmer in Sustainable Fisheries Management: Pacific Salmon, E. Knudsen et al Editors, Lewis Publishers, 2000, p. 65)

Sec. 16.05.221. Boards of fisheries and game.

(a) For purposes of the conservation and development of the fishery resources of the state, there is created the Board of Fisheries composed of seven members appointed by the Governor, subject to confirmation by a majority of the members of the legislature in joint session. The Governor shall appoint each member on the basis of interest in public affairs, good judgment, knowledge, and ability in the field of action of the board, and with a view to providing diversity of interest and points of view in the membership. The appointed members shall be residents of the state and shall be appointed without regard to political affiliation or geographical location of residence.



Authority:
AS 16.05.221, AS 39.05.060, AS 39.05.080, AS 39.05.100

Major Steps in Proposal Process

1- Call for Proposals

2- Distribution of Proposals

3- Public Review and Comment

4- Board Regulatory Meeting

5- Implementation



See 5 AAC 96.610

Board of Fisheries 3-year meeting cycle

Meeting Cycle: 2010/2011, 2013/2014, etc.

Area:

- Cook Inlet Area (All Finfish)
- Kodiak and Chignik Areas (All Finfish)
- King and Tanner Crab (Statewide)

Meeting Cycle: 2011/2012, 2014/2015, etc.

Area:

- Southeast/Yakutat Areas (All Finfish, Shellfish)
- Prince William Sound Area (All Finfish)
- Dungeness Crab, Shrimp, and Miscellaneous Shellfish (Statewide)
- Statewide Provisions (Shellfish)

Meeting Cycle: 2012/2013, 2015/2018, etc.

Area:

- Alaska Peninsula/Aleutian Island Areas (All Finfish)
- Arctic-Yukon-Kuskokwim Areas (All Finfish)
- Bristol Bay Area (All Finfish)
- Statewide Provisions (Finfish)

Proposal Form

ALASKA BOARD OF FISHERIES AND ALASKA BOARD OF GAME
REGULATION PROPOSAL FORM, P.O. BOX 25526, JUNEAU, ALASKA 99802-5526

BOARD OF FISHERIES REGULATIONS

☐ Fishing Area _____

☐ Subsistence ☐ Personal Use

☐ Sport ☐ Commercial

JOINT BOARD REGULATIONS

☐ Advisory Committee ☐ Regional Council ☐ Rural

BOARD OF GAME REGULATIONS

Game Management Unit (GMU) _____

☐ Hunting ☐ Trapping

☐ Subsistence ☐ Other _____

☐ Resident

☐ Nonresident

Please answer all questions to the best of your ability. All answers will be printed in the proposal packets along with the proposer's name (address and phone numbers. will not be published). Use separate forms for each proposal.

1. Alaska Administrative Code Number 5 AAC_____ **Regulation Book Page No.**_____

2. What is the problem you would like the Board to address?

3. What will happen if this problem is not solved?

4. What solution do you prefer? In other words, if the Board adopted your solution, what would the new regulation say?

5. Does your proposal address improving the quality of the resource harvested or products produced? If so, how?

6. Solutions to difficult problems benefit some people and hurt others:

A. Who is likely to benefit if your solution is adopted?

B. Who is likely to suffer if your solution is adopted?

7. List any other solutions you considered and why you rejected them.

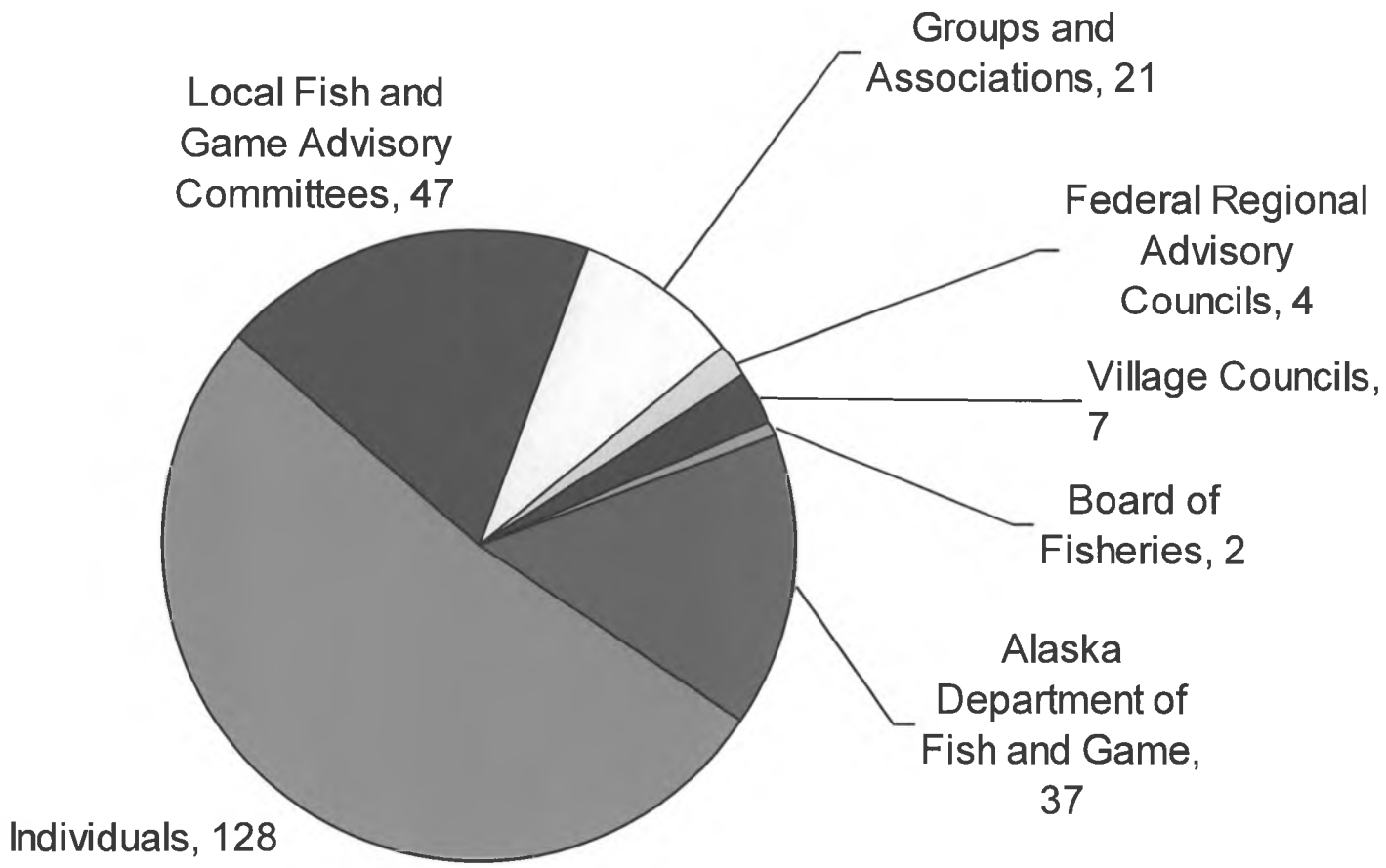
DO NOT WRITE HERE

Submitted By: Name

Individual or Group

Address_____ **Zip Code**_____ **Phone**

Source of Fishery Proposals (2006/2007)



Step 4 – Board Regulatory Meeting

Typical agenda for board meetings

- Introductions, ethics disclosures
- Department staff reports (~ half day)
- Oral public testimony (up to two days)
- Board committees* (3 board members, public panel and staff)

  to develop recommendations
- Board deliberation on proposals
- Miscellaneous Business

All elements of building a clear record

* board findings #2000-200-FB and #2000-199-FB describe committee process

Actions on Board of Fisheries Proposals

Board of Fisheries Actions on Proposals, 2005-2006

Action	Dec. 2005	Jan. 2006	Feb. 2006	Mar. 2006	All meetings	Percentage
Carried	11	27	23	14	75	21.2%
Carried as amended	12	19	11	12	54	15.3%
Failed	34	52	26	8	120	33.9%
No action	24	43	20	12	99	28.0%
Deferred	3	0	3	0	6	1.7%
Total	84	141	83	46	354	100.0%

Typically about one-third are adopted

Sources of Public Input:

- General public
- Fishery groups and associations
- Industry groups
- Local governments
- Tribal groups, village councils
- Local fish and game advisory committees
  - *(82 statewide)*



LOCAL FISH AND GAME ADVISORY COMMITTEES

Arctic Region: 9

Kotzebue, Lower Kobuk, Noatak/Kivalina, Northern Norton Sound, Northern Seward Peninsula, North Slope, St. Lawrence, Southern Norton Sound, Upper Kobuk

Interior Region: 15

Central, Delta, Eagle, Fairbanks, G.A.S.H., Koyukuk River, Lake Minchumina, McGrath, Middle Nenana River, Middle Yukon, Minto/Nenana, Ruby, Tanana/Rampart/Manley, Upper Tanana/Fortymile, Yukon Flats

Southcentral Region: 18

Anchorage, Central Peninsula, Cooper Landing, Copper Basin, Copper River/PWS, Denali, Homer, Kenai/Soldotna, Matanuska Valley, Mt. Yenlo, Paxson, Seldovia, Seward, Susitna Valley, Tok Cutoff/Nebesna Road, Tyonek, Valdez, Whittier

Southeast Region: 23

Angoon, Craig, East Prince of Wales, Edna Bay, Elfin Cove, Hydaburg, Hyder, Icy Straits, Juneau-Douglas, Kake, Ketchikan, Klawock, Klukwan, Pelican, Petersburg, Port Alexander, Saxman, Sitka, Sumner Strait, Tenakee, Upper Lynn Canal, Wrangell, Yakutat

Southwest Region: 12

Central Bering Sea, Chignik, False Pass, King Cove, Kodiak, Lake Iliamna, Lower Bristol Bay, Lower Kuskokwim, Naknek/Kvichak, Nelson Lagoon, Nushagak, Sand Point, Togiak, Unalaska/Dutch Harbor

Western Region: 5

Central Bering Sea, Central Kuskokwim, Lower Kuskokwim, Lower Yukon, Stony/Holitna

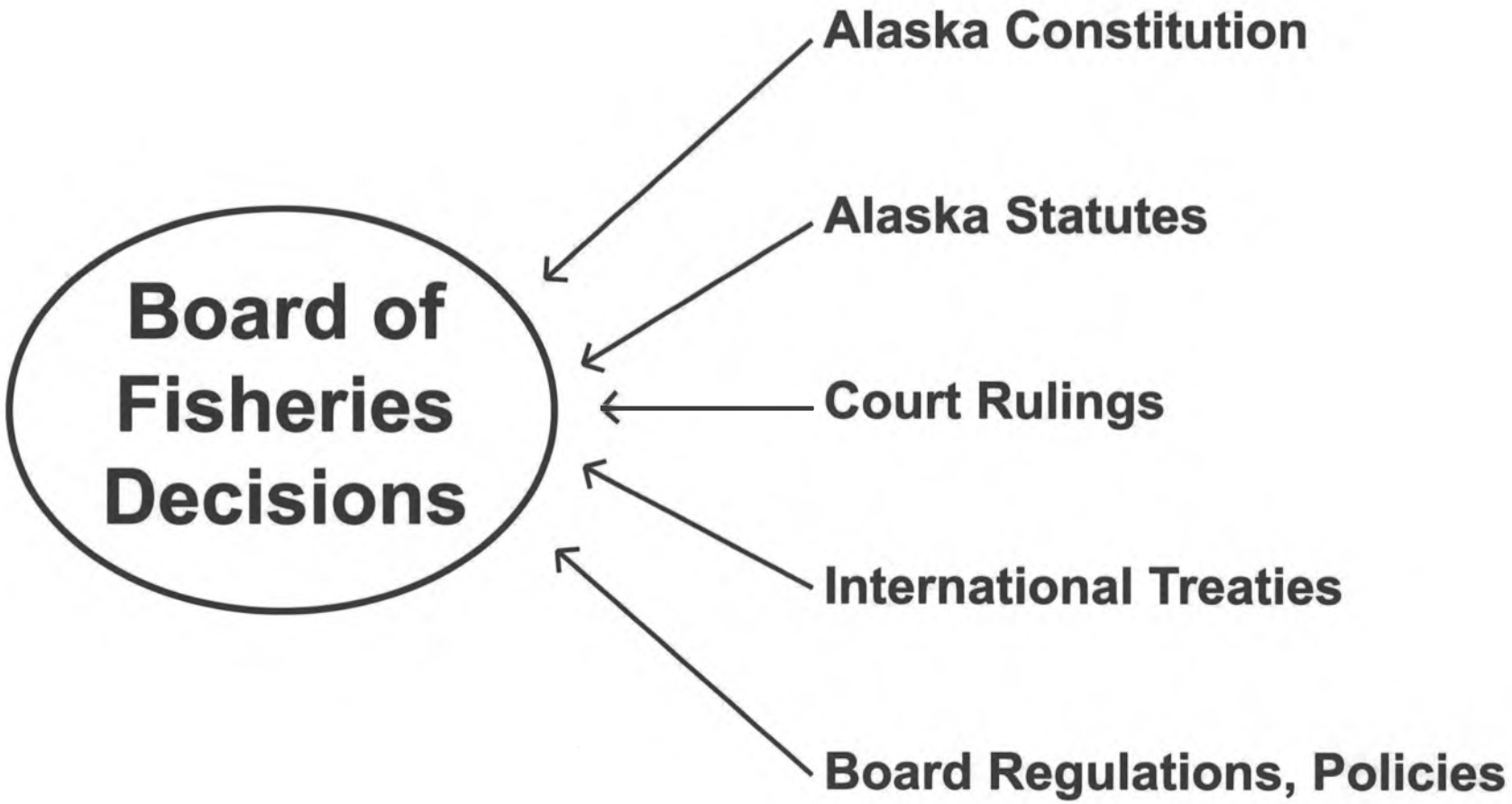
Reference: 5 AAC 96.021

Sources of Agency Input

- **Alaska Dept. of Fish & Game**
  - *Commercial Fisheries Division*
  - *Sport Fish Division*
  - *Subsistence Division*
- **Dept. of Law**
- **Dept. Public Safety/Division of Alaska Wildlife Troopers**
- **Commercial Fisheries Entry Commission**
- **North Pacific Fishery Management Council** *(federal)*
- **Office of Subsistence Management** *(federal)*



Legal and Policy Considerations – (for Board decisions)



Alaska Constitution

*"Fish, forests, wildlife, grasslands, and all other replenishable resources belonging to the State shall be utilized, developed, and maintained on the **sustained yield principle**, subject to preferences among beneficial uses"*

(Article 8, Section 4)



Alaska Statutes

- Board of Fisheries Authority (AS 16.05.221; AS 16.05.251)
  "Conservation and Development"
- Alaska Administrative Procedures Act (AS 44.62)
- Open Meetings Act (AS 44.62.310)
- Executive Branch Ethics Act (AS 39.52)



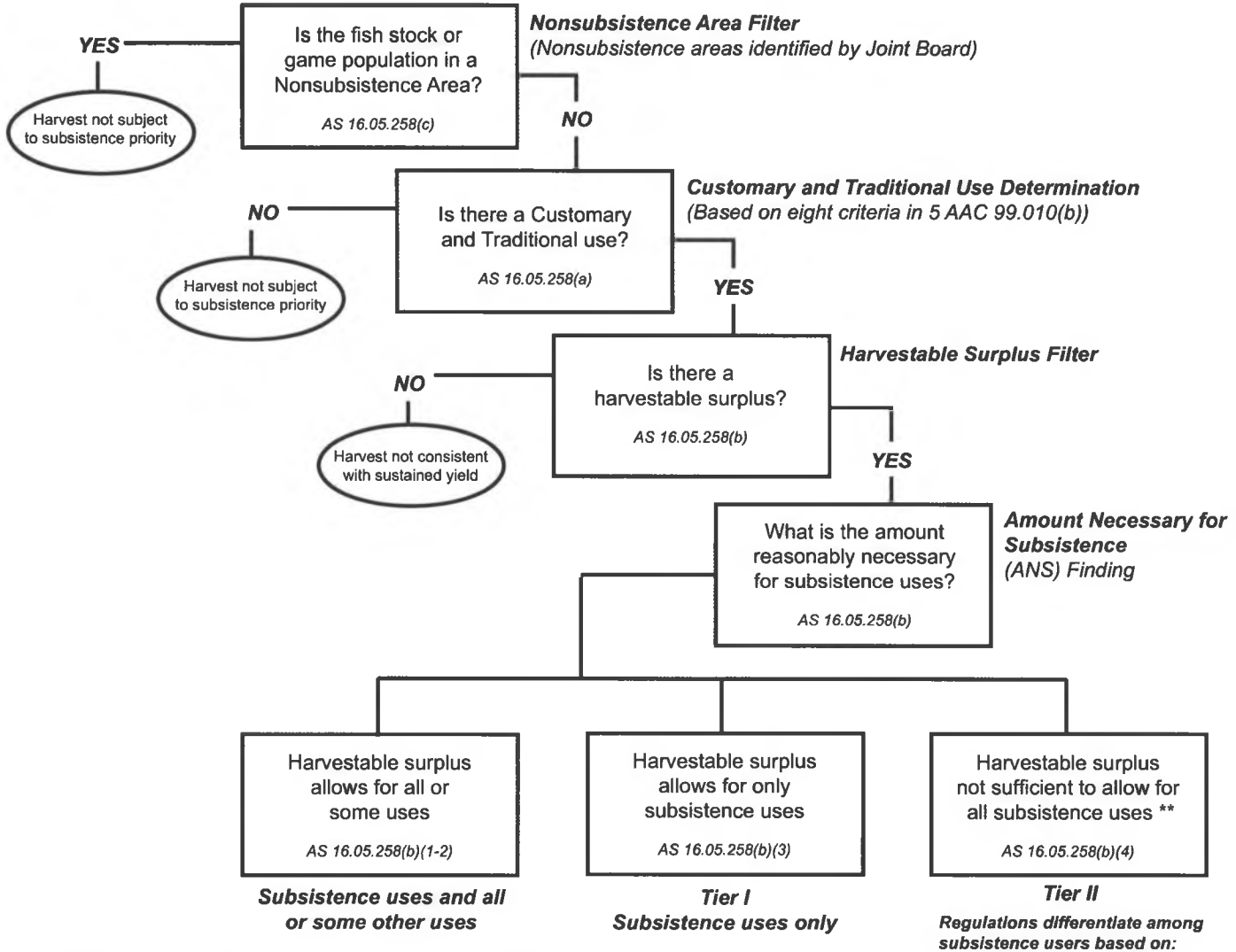
- Allocation Criteria
  (AS 16.05.251(e) and #91-129-FB)
  - >history of each fishery
  - >number of participants
  - >importance for personal and family consumption
  - >availability of alternative resources
  - >importance in local, regional, and state economy
  - >importance for providing recreational opportunity



- Management of Wild and Enhanced Stocks (AS 16.05.730)
- State Subsistence Law (AS 16.05.258)

Alaska Board of Fisheries and Game

Steps When Considering Regulations that Affect Subsistence Uses*



* Alaska Statute 16.05.258 Subsistence Use and Allocation of Fish and Game
** Harvestable surplus below lower end of ANS range

Board Regulations and Policies

- **Sustainable Salmon Fisheries Policy** (5 AAC 39.222)
- **Escapement Goal Policy** (5 AAC 39.223)
- **Mixed Stock Salmon Fisheries** (5 AAC 39.220 and #93-145-FB)
- **Emerging Fisheries** (5 AAC 39.210)



see list of all board findings at
http://www.boards.adfg.state.ak.us/fishinfo/regs/pfindx.php

Procedures for out-of-cycle actions

Board of Fisheries Agenda Change Request Policy (5 AAC 39.999)

Allows for out of cycle action for:

1. Conservation purpose
2. Correct errors
3. Unforeseen effect
4. Not mostly allocative

(form available)

And for coordination with federal agencies, programs, and laws

Joint Board Emergency Petition Policy (5 AAC 96.625(f))

Allows for out of cycle action for:

1. Unforeseen event that threatens resource
2. Unforeseen situation that would preclude biologically allowable resource harvest

Subsistence Proposal Policy (5 AAC 96.615(a))

Allows for out of cycle action:

1. For fish and game populations not previously considered
2. If expedited review required

Category 2 measures in BS/AI King/Tanner crab fishery (5 AAC 39.998)

Allows for out of cycle action:

1. For achieving consistency with federal Fishery Management Plan

Ways to Get Involved in the Board of Fisheries

1) **Get on Board's mailing list**
   http://www.boards.adfg.state.ak.us/bbs/contact/mailist.php
2) **Submit your written comments on proposals**
   Comment should be received two weeks prior to meetings
3) **Submit your own proposal**
   April 10 deadline and 3-year cycle
   Consult with area management staff
4) **Attend Board meetings and present testimony**
   Attend, testify, participate in committee meetings
5) **Join or attend your local fish and game advisory committee**
   Contact Boards Support Section for meeting dates and locations
6) **Join an industry or stakeholder group**
   Work with others with whom you share common interests



Summary

- Structured process
- Credibility critical
- High level of public participation



Alaska Board of Fish

Additional Information Packet

- Membership
- Meeting Schedules
- Process Diagram

ALASKA BOARD OF FISHERIES
Member List
(as of July 1, 2010)

NAME AND ADDRESS	*TERM EXPIRES*
Vince Webster (Chair) P.O. Box 121 King Salmon, AK 99613	6/30/2013
Tom Kluberton P.O. Box 200 Talkeetna, AK 99676	6/30/2013
Karl Johnstone (Vice Chair) 18618 Snowy Plover Circle Anchorage, AK 99516	6/30/2012
Mike Smith P.O. Box 70474 Fairbanks, AK 99707	6/30/2012
Mel Morris 917 Mill Bay Road Kodiak, AK 99615	6/30/2011
John Jensen P.O. Box 681 Petersburg, AK 99833	6/30/2011
Bill Brown 9150 Skywood Drive Juneau, AK 99801	6/30/2011

****

Alaska Board of Fisheries members may be reached at:

Boards Support Section
Alaska Department of Fish and Game
P.O. Box 115526
Juneau, AK 99811-5526
Phone: (907) 465-4110
Fax: (907) 465-6094
www.boards.adfg.state.ak.us

ALASKA BOARD OF FISHERIES
2010/2011
TENTATIVE MEETING SCHEDULE

Cook Inlet, Kodiak and Chignik Finfish; and
King and Tanner Crab (Statewide, except Southeast/Yakutat)

PROPOSAL DEADLINE: 5:00 p.m. Friday, April 9, 2010

Meeting Dates	Topics	Location	Written Comment Deadline
October 13-14, 2010 (2 days)	**Work Session** (Agenda Change Requests*, cycle organization, and Stocks of Concern)	**Kenai** Challenger Center	September 29, 2010
November 15-18, 2010 (4 days)	**Lower Cook Inlet Finfish**	**Homer** Kachemak Bay Research Reserve	November 1, 2010
January 11-14, 2011 (4 days)	**Kodiak Finfish**	**Kodiak** Harbor Convention Center	December 28, 2010
January 16-19, 2011 (4 days)	**Chignik Finfish**	**Anchorage** Hilton Hotel	December 28, 2010
February 20-March 5, 2011 (14 days)	**Upper Cook Inlet Finfish**	**Anchorage** Egan Center	February 4, 2011
March 22-26, 2011 (5 days)	**King and Tanner Crab** (Statewide, except Southeast/Yakutat) and Supplemental Issues	**Anchorage** Hilton Hotel	March 8, 2011

Total meeting days: 33

* Agenda Change Request Deadline: 5:00 p.m. August 27, 2010

Adopted 10/14/09; updated 6/25/10

ALASKA BOARD OF FISHERIES
2011/2012 Cycle
Tentative Meeting Schedule

Southeast, Yakutat, Prince William Sound, and Upper Copper/Upper Susitna Finfish; Southeast and Yakutat Crab*, Shrimp, and Shellfish; Statewide Miscellaneous Shellfish; Prince William Sound, Cook Inlet, Kodiak, Chignik, and South Alaska Peninsula Pacific cod; and Supplemental Issues

PROPOSAL DEADLINE: 5:00 p.m. Friday, April 8, 2011

Meeting Dates	Topics	Location	Comment Deadline
October 11-12, 2011 [2 days]	**Work Session** ACRs, cycle organization, Stocks of Concern	**Anchorage** Coast International Inn	Sept. 28, 2011
October 13-17, 2011 [5 days]	**Pacific Cod for PWS, Cook Inlet, Kodiak, Chignik, and South Alaska Peninsula**	**Anchorage** Coast International Inn	Sept. 28, 2011
December 1-6, 2011 [6 days]	**Prince William Sound and Upper Copper/Upper Susitna Finfish**	**Anchorage** Coast International Inn	Nov. 16, 2011
January 18-24, 2012 [7 days]	**Southeast and Yakutat Crab, Shrimp, Misc. Shellfish** (including Dungeness, King, and Tanner)	**Petersburg** Sons of Norway	Jan. 3, 2012
Feb. 24-Mar. 4, 2012 [10 days]	**Southeast and Yakutat Finfish** (including salmon, herring, groundfish)	**Ketchikan** Ted Ferry Civic Center	Feb. 9, 2012
March 20-23, 2012 [4 days]	**Statewide Dungeness Crab, Shrimp, Misc. Shellfish** (except Southeast and Yakutat) and Supplemental Issues	**Anchorage** Hilton Hotel	Mar. 5, 2012

Total Meeting Days: 34
Agenda Change Request Deadline: August 26, 2011 [*45 days prior to fall worksession*]

Adopted 10/14/10

ALASKA BOARD OF FISHERIES
LONG-TERM MEETING CYCLE
(Three-year cycle)

The board meeting cycle generally occurs from October through March. The board considers changes to regulations on a region-based schedule. All fisheries are considered when the regional area, shellfish species, or statewide regulations are before the board. The fisheries include subsistence, sport, guided sport, personal use, and commercial. Special petition and agenda change request procedures are available for the board to consider out-of-cycle requests.

NOTES:
1) Statewide shellfish regulations will not be considered every meeting cycle. When setting the future meeting schedule annually, the board will determine whether to consider statewide finfish or shellfish regulations for that meeting cycle.
2) The proposal deadline is April 10 every year. ***If April 10 falls on a weekend, the proposal deadline is the Friday preceding that weekend.***

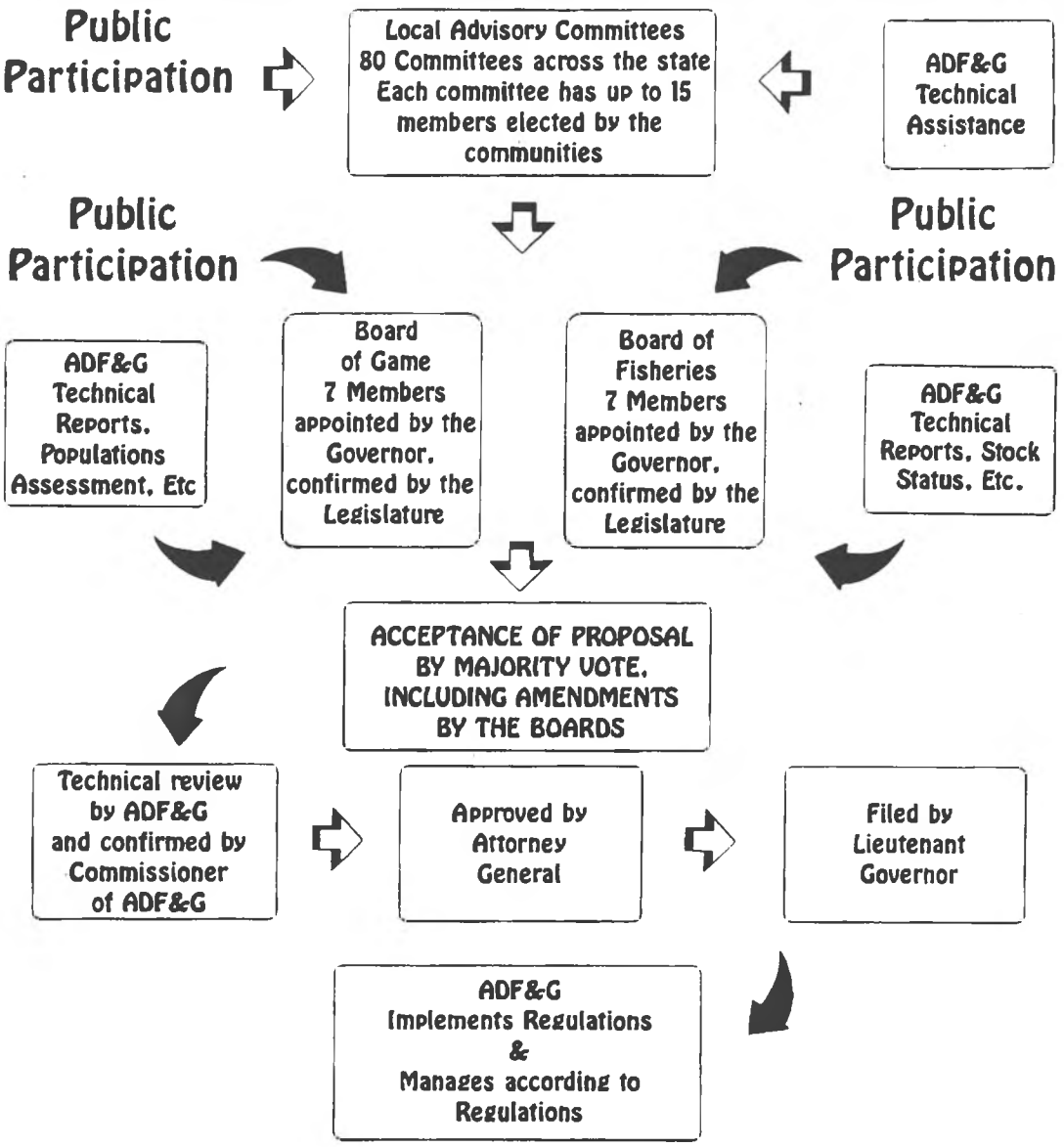
Meeting Cycle:	2010/2011	2013/2014	2016/2017	2019/2020
Area:				
Cook Inlet Area (All Finfish)				
Kodiak and Chignik Areas (All Finfish)				
King and Tanner Crab (Statewide, except Southeast/Yakutat)				

Meeting Cycle:	2011/2012	2014/2015	2017/2018	2020/2021
Area:				
Prince William Sound Area (All Finfish)				
Southeast/Yakutat Areas (All Finfish)				
Southeast/Yakutat Areas (King Crab, Tanner Crab, Dungeness Crab, Shrimp; and Miscellaneous Shellfish)				
Statewide Miscellaneous Shellfish and Provisions				

Meeting Cycle:	2012/2013	2015/2016	2018/2019	2021/2022
Area:				
Alaska Peninsula/Aleutian Island Areas (All Finfish)				
Arctic-Yukon-Kuskokwim Areas (All Finfish)				
Bristol Bay Area (All Finfish)				
Statewide Provisions for Finfish				

THE MEETING CYCLE REPEATS ITSELF EVERY THREE YEARS. This schedule was adopted November 9, 1990, updated October 13, 2006.

Board Regulatory Process



2/15/11 Overview: Sport Fish Sector

<TARGET><BILL></BILL><SUBJECT>2-15-11 Overview Sport Fish Sector</SUBJECT><COMM>HFSH27</COMM></TARGET>

Script House Fisheries - Tuesday, February 15, 2011

(GAVEL IN)

Let's call this meeting of the House Fisheries Committee to order. Let the record reflect that it is ____ p.m., Tuesday, February 15th, 2011.

Present today are:

___ Vice-Chair Johnson

___ Representative Austerman

___ Representative Herron

___ Representative Pruitt

___ Representative Kawasaki

___ and Myself, Chairman, Representative Thompson

At today's meeting, the Committee will be receiving its first Industry Overview with a presentation about the Sport Fish sector. Also on the Agenda is consideration of House Bill 60 – *regarding Geoduck Aquatic Farming.*

With us we have Ricky Gease, Executive Director for the Kenai River Sportfishing Association. Mr. Gease, if you would please come forward and place yourself on the record, the Committee is ready for your presentation. And, as a reminder, Members should feel free to ask questions as they arise.

Sportfishing Presentation

Thank you, Mr. Gease. Are there any (further) questions regarding Sport Fishing? Vice-Chair Johnson?

Now we'll take a brief at ease while we arrange for the next order of business.

(Gavel)

House Bill 60

(Gavel)

We are back on the Record.

Our next order of business is to hear House Bill 60 and the Sponsor, Representative Seaton, is here to introduce the bill to the Committee. Representative Seaton, if you would please place yourself on the Record, you may proceed with your introduction.

HB 60 Introduction

Thank you, Representative Seaton. Are there any (further) questions for the Sponsor? Vice-Chair Johnson?

Public Testimony

We'll now open it up for Public Testimony. Jeff Hetrick, of the Alutiiq (A-loo-tik) Pride Shellfish Hatchery, and Rodger Painter, Executive Director of the Alaska Shellfish Growers Association, are here to testify in support of the Bill proposed legislation but first I'd like to hear from the Administration. Miss Aspelund, would you please come forward and place yourself on the record?

(Administration Testimony).

Are there any (further) questions for the Administration? Thank you, Miss Director.

Our next testifier is Jeff Hetrick. Mr. Hetrick, if you will please come forward and state your name and affiliations for the record, you may begin your testimony. (testimony). Are there any questions from committee members for Mr. Hetrick? Thank you for your testimony.

Now we'll hear from Rodger Painter. Mr. Painter, if you will please come forward and state your name and affiliations for the record, you may begin your testimony. (testimony). Are there any questions from committee members for Mr. Painter? Thank you for your testimony.

Is there anyone (else) in the audience or online wishing to testify on HB 60?

*Public Testimony Script (**if necessary**)*

Yes, _____. If you would please state your name and affiliation for the Record, the Committee will hear your testimony.

Are there any (further) questions for_____.

Hearing none, Public Testimony is now closed.

Are there any (further) questions or comments on House Bill 60 from the committee? Discussion?

Hold HB 60

A number of concerns regarding the potential impacts of this legislation have been raised and I think the committee should explore them further before moving this legislation. Therefore, the Committee will hold this bill over for answers to member questions and further discussion.

Move HB 60

Hearing none, the Chair will now entertain a motion.

Then , without objection, **House Bill 60, version 27-LS0318/A**, is moved from Committee with attached zero Fiscal Note and individual recommendations.

That concludes our business for the evening. Our next Fisheries Committee meeting will be at 5:00 p.m. on Thursday, February 17, 2011. At that meeting, we will receive a presentation on the North Pacific Fishery Management Council and then hear House Bill 141 – *regarding loans to community quota entities*.

The time is now _____ p.m. and, there being no further business, I adjourn today's meeting of the House Special Committee on Fisheries.

(GAVEL OUT)


KENAI RIVER SPORTFISHING
ASSOCIATION

Today's Talk – Brief Overview

- KRSA – a Leader in Fishery Conservation
  Who we are, What we do
- Sportfishing – Significance to Alaska
- Economic Values – Size & Scope

Transition Team Topics: Better Integration of Business Intelligence

- Smart Management – Involve Stakeholders
- Access & Infrastructure – Prioritize & Invest
- Human Resources – Prioritize & Invest
- Digital Age – Prioritize & Invest
- Economic Data & Analysis – Prioritize & Invest
- Compensated Reallocation – Halibut
- Professional Sportfishing Guide Services Board



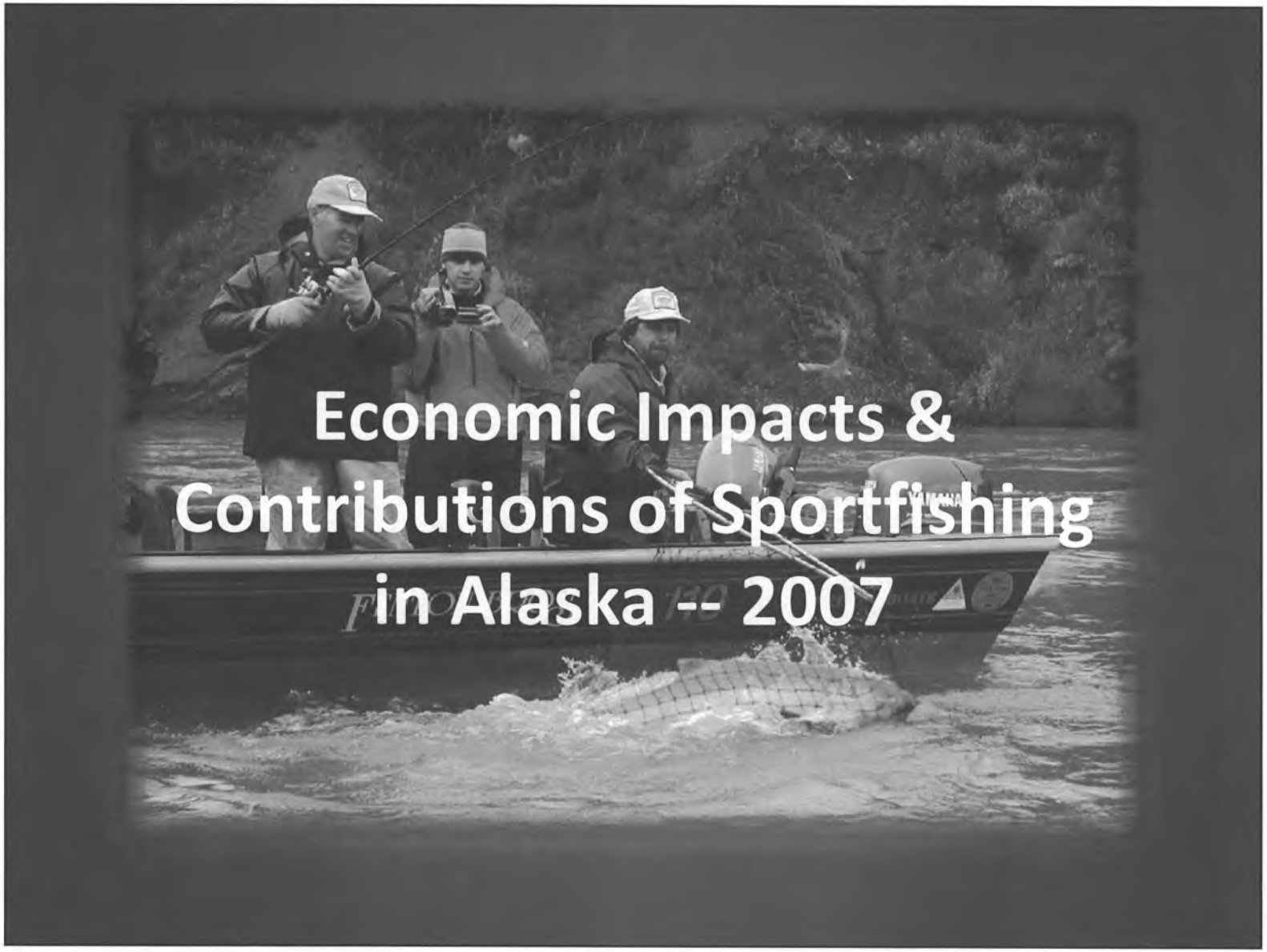
KRSA

- Professional 501 (c) (3) Charitable Non-Profit
- Kenai River Classic Fundraising Events
- Habitat Restoration & Access
- Fisheries Management
- Habitat, Fisheries & Economic Research
- Angler Education

~300 Members

Sportfishing Significance in AK

- World Class Fishing
- Quality of Life for Alaskans
- Important For Tourism
- Economic Engine
- ADFG (2007) – Economic Impacts & Contributions of Sportfishing in Alaska


Economic Impacts &
Contributions of Sportfishing
in Alaska -- 2007

Sportfishing Size and Scope

- $1.4 Billion Total Sportfishing Expenditures, All Anglers
- $123 Million Generated in State & Local Tax Revenues
- Supported 15,879 Full & Part-time Jobs

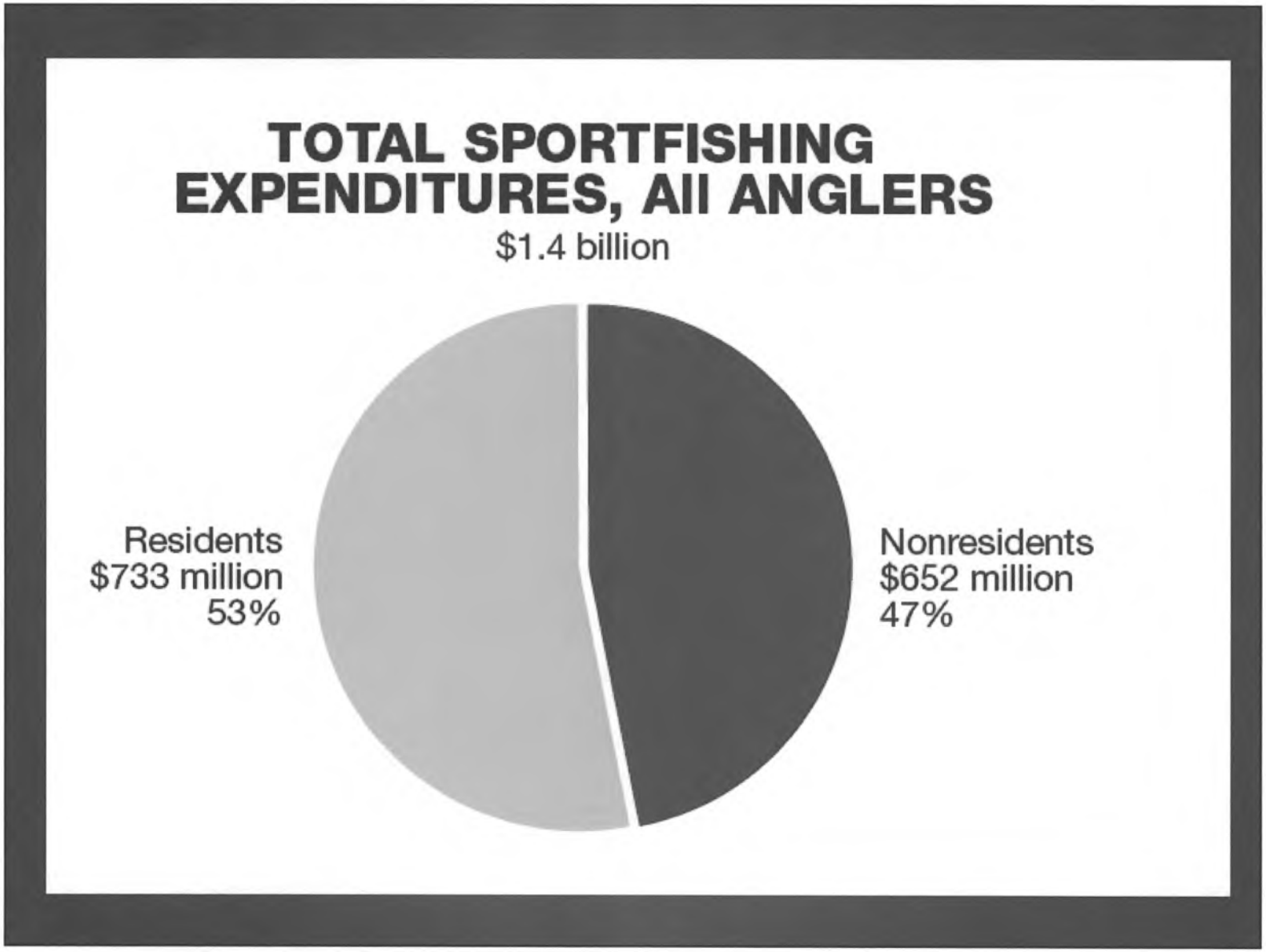
475,534 Licensed Anglers

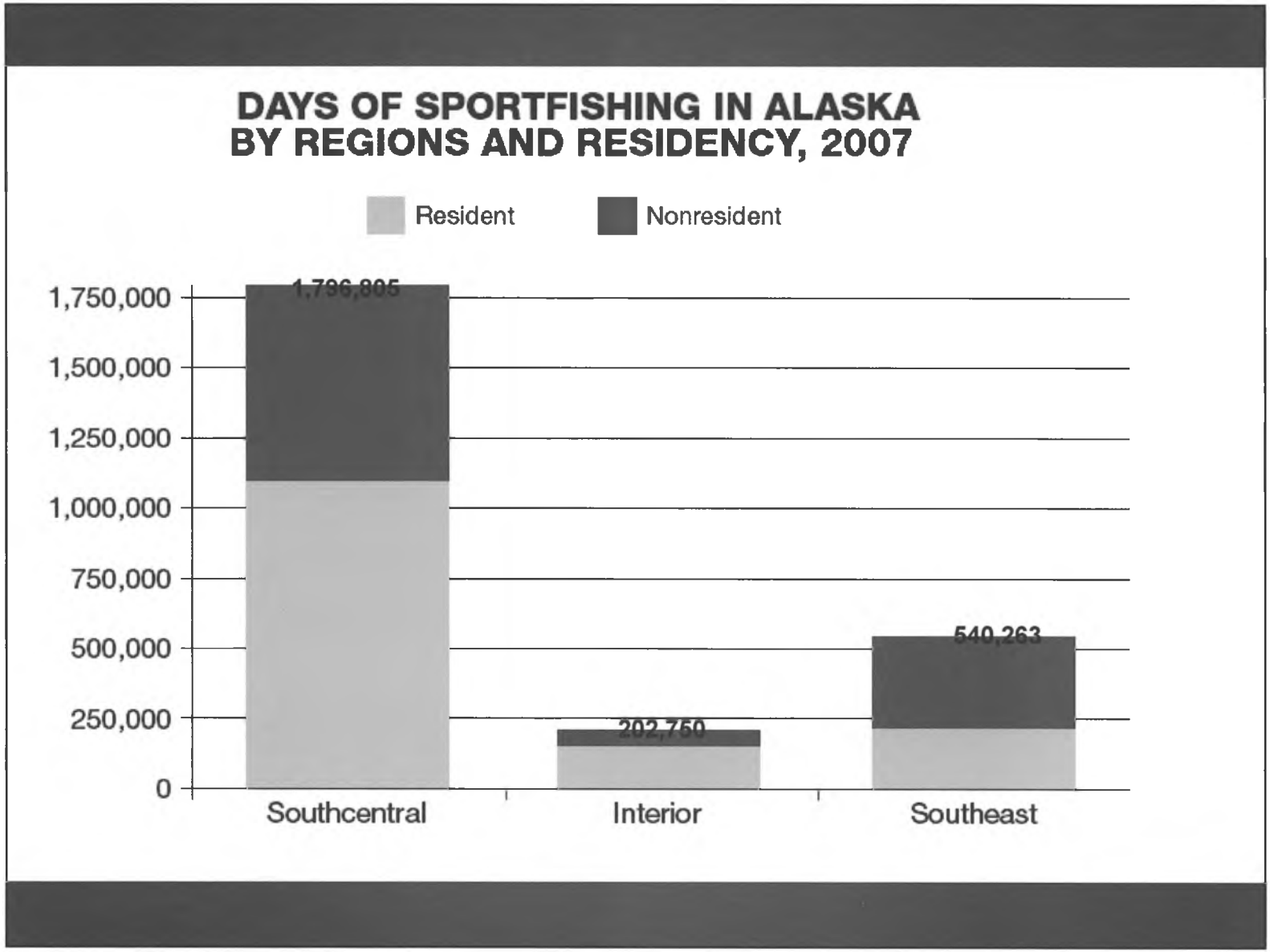
Resident: 190,644
Nonresident: 284,890

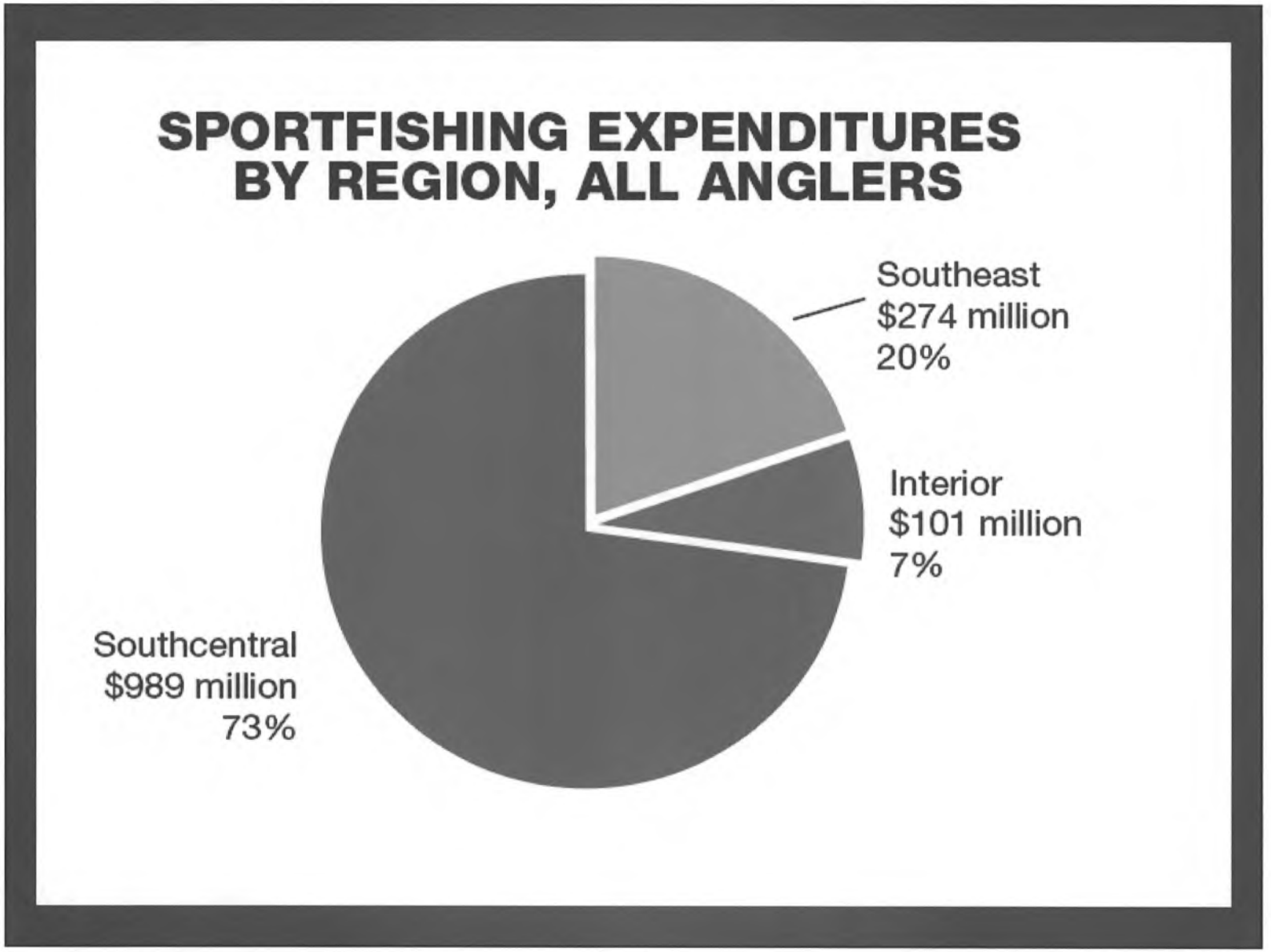
2.5 Million angler days

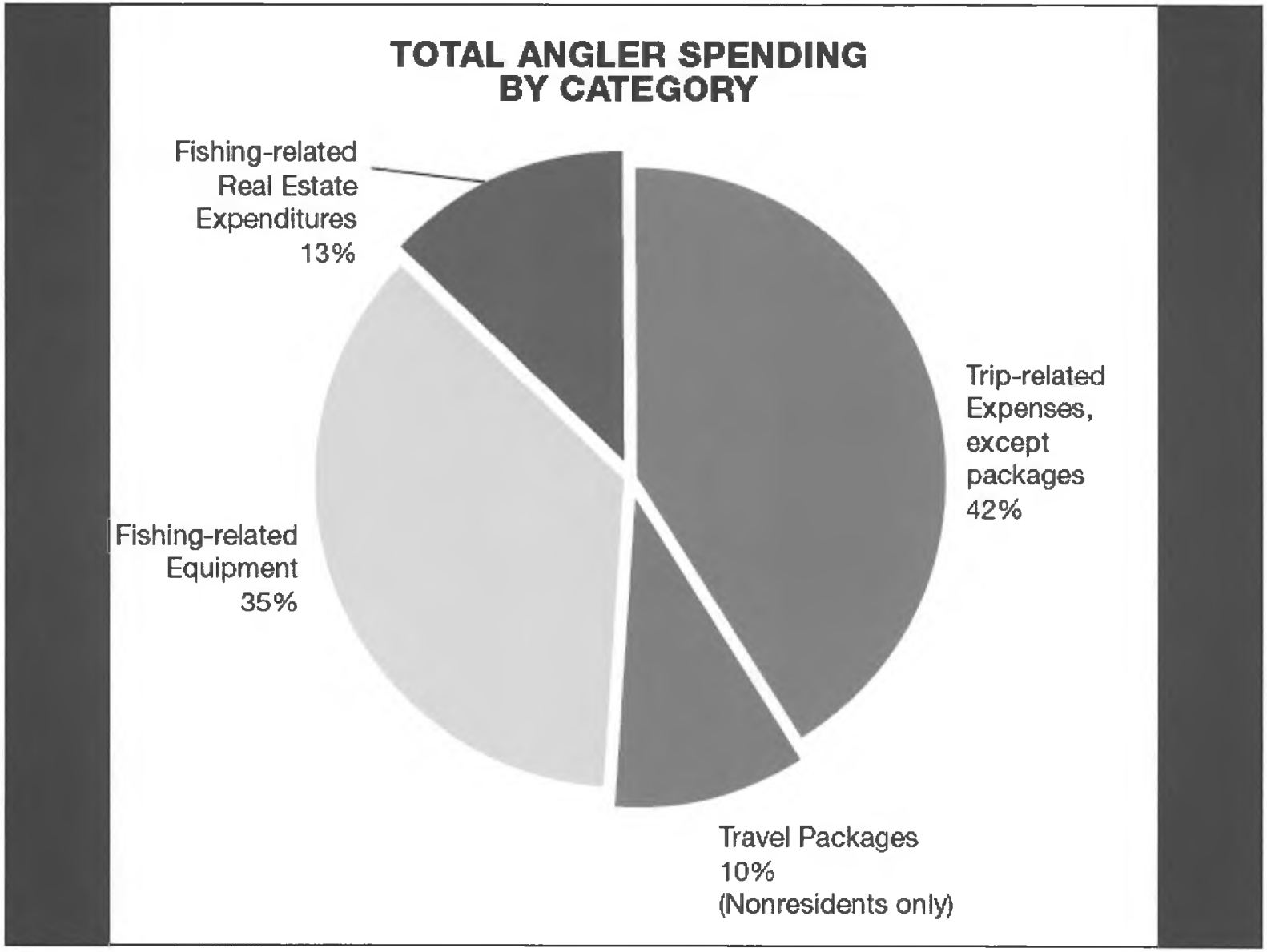
Resident: 1.4 Million days (56%)
- Guided: 9%
- Unguided: 91%

Nonresident: 1.1 Million days (44%)
- Guided: 43%
- Unguided: 57%


TOTAL SPORTFISHING EXPENDITURES, All ANGLERS
$1.4 billion
Residents
$733 million
53%
Nonresidents
$652 million
47%


DAYS OF SPORTFISHING IN ALASKA
BY REGIONS AND RESIDENCY, 2007
Resident
Nonresident
1,750,000
1,500,000
1,250,000
1,000,000
750,000
500,000
250,000
0
1,796,805
202,750
540,263
Southcentral
Interior
Southeast


SPORTFISHING EXPENDITURES
BY REGION, ALL ANGLERS
Southeast
$274 million
20%
Interior
$101 million
7%
Southcentral
$989 million
73%


TOTAL ANGLER SPENDING
BY CATEGORY
Fishing-related
Real Estate
Expenditures
13%
Trip-related
Expenses,
except
packages
42%
Fishing-related
Equipment
35%
Travel Packages
10%
(Nonresidents only)

Average Per Day Expenditure for Trip-Related Items Only, Including Package Trips

(Lodging, fuel, food, travel packages, etc.)

	Per Day
All Alaska Fishing Combined	**$277.46**
Residents Only	$150.63
Non-Residents Only	$448.78
Saltwater	
Residents, Unguided	$162.81
Residents, Guided	$466.53
Non-Residents, Unguided	$209.40
Non-Residents, Guided	$744.03
Freshwater	
Residents, Unguided	$91.73
Residents, Guided	$509.56
Non-Residents, Unguided	$213.24
Non-Residents, Guided	$790.41

Transition Team Topics: Better Integration of Business Intelligence

Smart Management – Involve Stakeholders

- Strategic Planning
- Program Evaluation
- Identify Bottlenecks
- Customer Service

Permitting Process

Transition Team Topics: Better Integration of Business Intelligence

Access & Infrastructure – Prioritize & Invest

- Ensure Public Access to Fish, Game & Recreational Resources
- Strategic Planning Process with ADF&G, DNR, DOT & Stakeholders – Prioritized Projects List
- Capital Budget – Like STIP, create a State Public Access Improvement Program (SPAIP)

Transition Team Topics: Better Integration of Business Intelligence

Human Resources – Prioritize & Invest

- Recruitment & Retention of Key Permitting & Scientific Staff is an Ever-Increasing Concern in ADF&G, DNR & DEC
- Competition from Feds & Private Sector
- Recognize Serious Nature of Issue
- Formulate Management Strategies

Transition Team Topics: Better Integration of Business Intelligence

Digital Age – Prioritize & Invest

- Go Digital – Fisheries Data Collection Systems
- Engage Private Sector Technological Expertise Wherever Possible
  - Incorporate Visual Learning Systems
  - Invest in Fisheries Modeling Systems

Transition Team Topics: Better Integration of Business Intelligence

Economic Data & Analysis – Prioritize & Invest

- Comprehensive, real-time data collection & analysis systems are lacking for recreational, social & economic values for sport, personal use, subsistence & commercial fisheries
- Difficult to regulate & manage for optimal yields of fishery resources without such data

Transition Team Topics: Better Integration of Business Intelligence

Compensated Reallocation – Halibut

- Train wreck for SE Alaska coastal economy
- Negative impacts commercial & guided sport
- Feds: minimal guided sport stakeholder input
- Limited Entry Program & Catch Share Plan – good intentions, poor implementation
- State Management Options?

Transition Team Topics: Better Integration of Business Intelligence

SB 24

Professional Sportfishing Guide Services Board

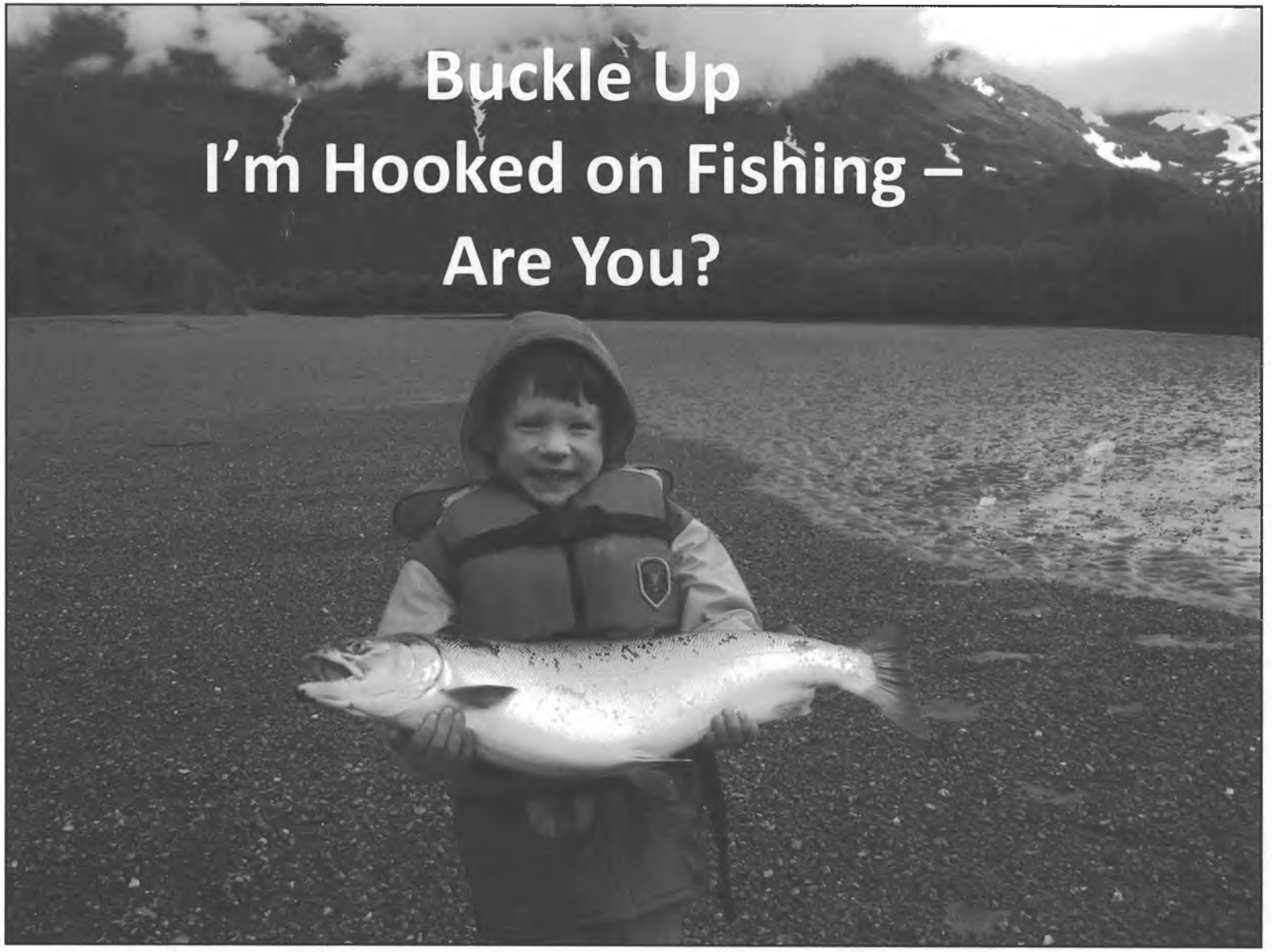
- Assure Alaska's guided sport industry competes favorably with other world class destinations
  - Diligent oversight for sport fishing services industry – like any prudent investments
- Benefits of Industry Recognition & Regulation
  - Logbook program – permanent, vital tool

It's Sunsetting

KRSA
Partner in Sustainability

- Habitat
- Fisheries Management
- Research
- Education




Buckle Up
I'm Hooked on Fishing –
Are You?


Questions
&
Answers



Ricky Gease
Executive Director

Kenai River Sportfishing Association

(907) 262-8588
ricky@kenairiversportfishing.com







ECONOMIC IMPACTS AND CONTRIBUTIONS OF SPORTFISHING IN ALASKA



2007 REPORT



A Message from the Director

CHARLIE SWANTON, DIRECTOR
ADF&G, DIVISION OF SPORT FISH

Alaska supports arguably some of the finest and most diverse sportfishing in the world. These opportunities provide Alaskans with a significant and sustainable source of food, relaxation, and social benefits. Additionally, the money spent by residents and visitors who participate in sportfishing activities produces significant economic benefits to Alaska.

The Division of Sport Fish is committed to providing an array of biological, social and economic information to fishery managers and fishery regulators who plan and evaluate fishery projects and make informed decisions about the management of fishery resources.

This report summarizes a recent effort by the Division to provide estimates of angler spending in Alaska and the contribution it makes to Alaska's economy. The results are based on an extensive statewide study of resident and nonresident anglers who went sportfishing in Alaska during 2007. The report contains estimates of the total expenditures on sportfishing by anglers and estimates of the subsequent economic effects this spending had in terms of employment, wages, salaries and tax receipts.

A key objective of this project was to establish a consistent and repeatable methodology for collecting and reporting estimates of economic contribution in Alaska such that reasonably precise estimates would be routinely available to agency personnel, fisheries decision-makers, and the public.

We hope that you find the following information useful and that it contributes to well-informed decision making.





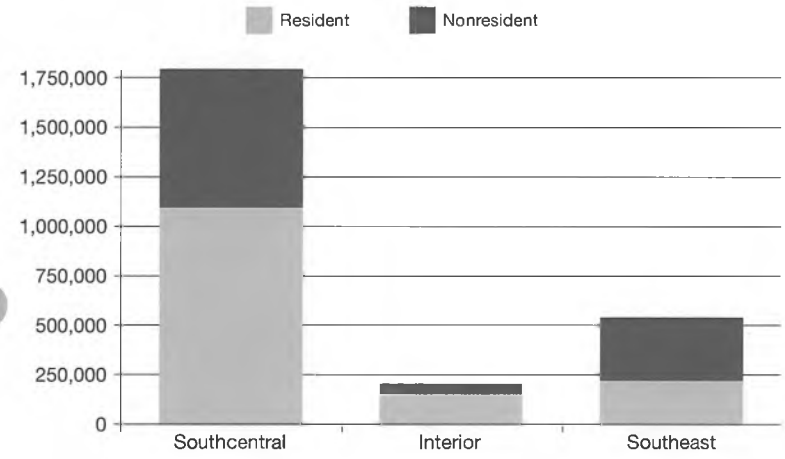
Sportfishing in ALASKA

Sportfishing is an important component of the Alaskan economy. It contributes to the well-being of Alaskans as recreation, as a source of food, and as part of the state's collective economic fabric. In 2007, 190,644 Alaska residents bought a fishing license, along with 284,890 nonresidents.

Spending a day fishing with rod and reel usually involves spending at least some money for travel, equipment, and supplies. Because a large number of anglers—both resident and nonresident—spend many days each year enjoying Alaska's diverse fishing opportunities, the annual total of that spending is substantial.

The money spent by anglers in turn helps to support thousands of Alaskan jobs in industries ranging from fishing tackle sales to hospitality and lodging to air taxi and guide services which are an important part of the economy in many of Alaska's local communities. At the same time, angler spending is also creating federal, state and local tax revenues which support local and borough governments and help pay for fisheries management in Alaska.

DAYS OF SPORTFISHING IN ALASKA BY REGIONS AND RESIDENCY, 2007

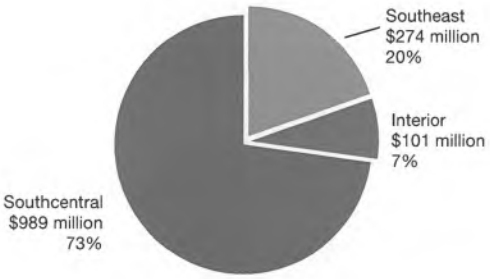


TOTAL SPORTFISHING EXPENDITURES, All ANGLERS

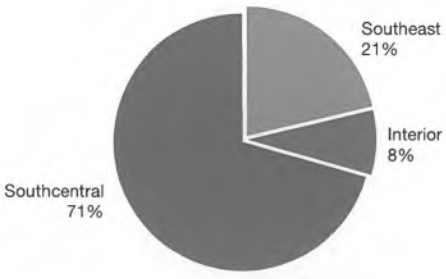
$1.4 billion



SPORTFISHING EXPENDITURES BY REGION, ALL ANGLERS



DAYS OF SPORTFISHING BY REGION, ALL ANGLERS









Economic IMPACTS & Contributions

Economic Impact vs. Economic Contribution

This project measured and reported the economic impacts and contributions of licensed anglers to Alaska's state and regional economies. The words "impact" and "contribution" are not necessarily synonymous.

Economic impact typically refers to the effects of money being brought in from outside the state or region. It was possible to estimate the total amount of resident and nonresident spending in Alaska as a whole and within specific regions by combining the economic survey results with the ADF&G Statewide Harvest Survey results.

Economic contribution refers to in-state spending by all anglers. In theory, if the dollars spent by resident anglers were not spent on sportfishing, the same money would be spent on other things and would still stimulate economic activity. It isn't possible to accurately predict whether these local dollars would be spent in or outside of Alaska.

This study generated both economic impact estimates (non-resident spending) as well as estimates of the economic contributions of spending by Alaska anglers in 2007.

The purpose of the study was to obtain current estimates of the economic contribution of sportfishing activities to the Alaska economy and to develop a consistent method for producing such estimates on a regular basis. This project provides a survey-based process that can now be updated periodically at reasonable cost.

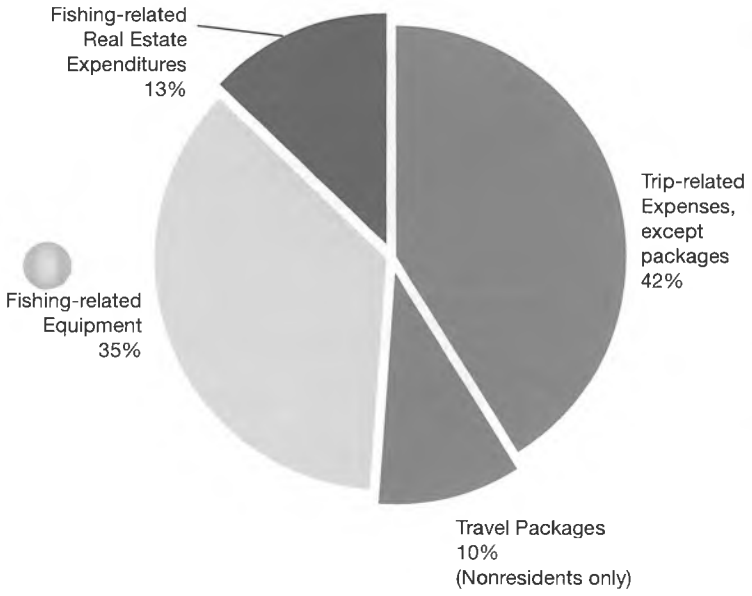
For 2007, the year covered by this report, 1,163 resident and 1,807 nonresident surveys were completed by anglers who fished in Alaska. From the survey responses collected, estimates of how much each angler spends per day of fishing and per year on fishing-related equipment were produced. These survey results were combined with the total number of licensed anglers in 2007 and the total days of fishing in Alaska as estimated by the Division's Statewide Harvest Survey. This survey, conducted every year by the Division, tracks annual sportfishing participation and harvest. By combining the economic survey results with the Statewide Harvest Survey results, it was possible to estimate the total amount of resident and nonresident spending in Alaska as a whole and within specific regions of the state.

An economic model was then used to estimate the additional economic effects that angler spending produced within each region of the state. Using the collective dollars spent by anglers, an economic model known as IMPLAN estimated the total jobs, tax revenues and other economic contributions. Regional as well as statewide totals can be determined and are summarized in the following pages. Information on the dollars associated with guided fishing trips and with nonresident fishing is also included. First, here are some statewide highlights.

Total Resident and Nonresident Sportfishing Expenditures, by Category

	Resident Anglers	Nonresident Anglers	All Anglers
Licenses and Fees	$6,627,558	$16,536,955	$23,164,513
Trip Expenditures (non-package)	$219,829,151	$347,358,999	$567,188,150
Package Expenditures	n/a	$137,519,700	$137,519,700
Equipment Expenditures	$433,693,104	$41,385,450	$475,078,554
Real Estate Expenditures	$73,139,537	$109,697,619	$182,837,156
Total Expenditures	**$733,289,349**	**$652,498,723**	**$1,385,788,072**

TOTAL ANGLER SPENDING BY CATEGORY



Average Per Day Expenditure for Trip-Related Items Only, Including Package Trips

(Lodging, fuel, food, travel packages, etc.)

	Per Day
All Alaska Fishing Combined	**$277.46**
Residents Only	$150.63
Non-Residents Only	$448.78
Saltwater	
Residents, Unguided	$162.81
Residents, Guided	$466.53
Non-Residents, Unguided	$209.40
Non-Residents, Guided	$744.03
Freshwater	
Residents, Unguided	$91.73
Residents, Guided	$509.56
Non-Residents, Unguided	$213.24
Non-Residents, Guided	$790.41

ECONOMIC ACTIVITY, OR MULTIPLIER EFFECT: SUPPORTED BY GUIDED AND UNGUIDED FISHING TRIPS

Trip-related and Package Expenditures*



JOBS: SUPPORTED BY GUIDED AND UNGUIDED FISHING TRIPS

Trip-related and Package Expenditures*



*Only trip related expenditures (food, fuel, lodging, etc.) could be divided into guided and unguided portions. It was not possible to divide equipment expenditures in such a manner.







How Economic Effects Occur

While the economic effects of sportfishing occur on a large scale statewide, it's important to note that they happen one angler at a time.

Suppose, for example, that a construction worker in downtown Anchorage decides to go fishing on his day off. He stops after work at the local tackle shop and spends $250 for a rod and reel along with some line, lures, a knife and cooler. Sandwiches, soda, and ice for the trip come from the local grocery store, and he spends still more money to fill his vehicle with gas on the way home. Very early the next morning, he starts the 150-mile drive out the Seward and Sterling highways to the Kenai River where he'll fish for king or coho salmon.

Meanwhile, the money he left behind goes to work. Some of the money he spent for fishing gear helps to pay the wages of a sales clerk, for example, who in turn spends some that evening at a local restaurant, to buy groceries, or pays his utility bill at the local light and power company. These payments, known collectively as the "multiplier effect", help to support still other jobs as the money our angler spent ripples outward in many directions through the local economy, even to those sectors not directly related to fishing. See page 11 for more definitions.

Regional Economic EFFECTS

Economic effects can be measured regionally and locally as well as statewide. Alaska has several distinct regions, each with its own characteristic sport fisheries that show different patterns in angling participation, spending, and economic effects.

STATEWIDE RESULTS

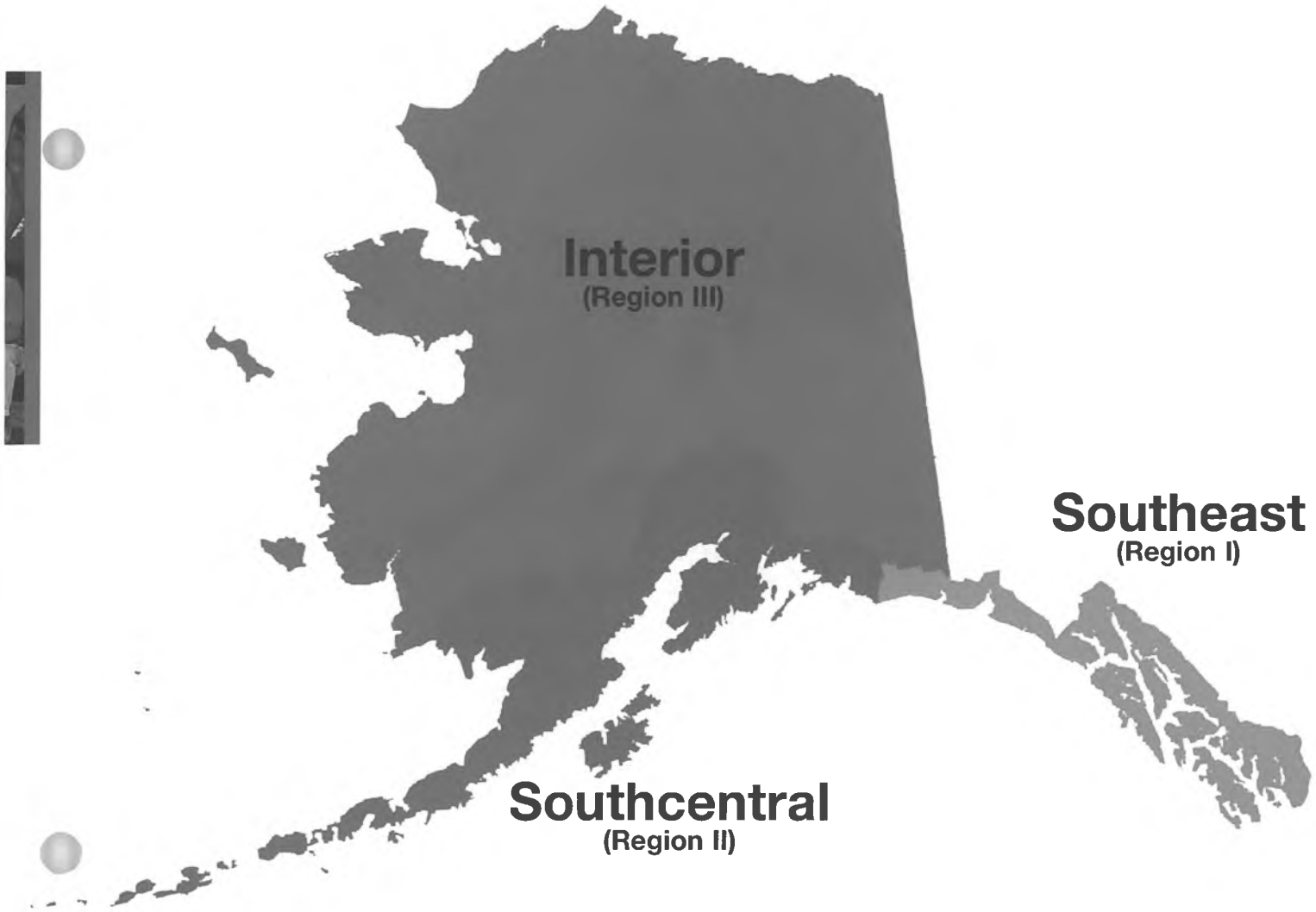
Alaska is blessed with many world-class freshwater and marine fisheries. In 2007, resident and nonresident anglers spent nearly $1.4 billion on equipment, boats, and trip-related and other items. Alaska anglers on average spent $2,914 on sportfishing trip expenses, fishing-related equipment, licenses, and other items in 2007. The actual amount spent per angler varies based on his or her preferred fishing locations, region, and more. Details are available in the technical report (see sidebar on page 8).

As anglers' expenditures exchange hands, economic contributions are generated statewide. In 2007, these contributions amounted to 15,879 jobs, $246 million in tax revenues and $545 million in income. Economic output, which is the value of all goods and services produced by businesses as a result of anglers' expenditures, was just over $1.6 billion.

SOUTHEAST (REGION I)

The so-called Panhandle area extending roughly from Yakutat south-southwest through Juneau and Ketchikan to the British Columbia border is a complex maze of islands, straits, and mountains. The saltwater salmon fishing here is outstanding, although some anglers find steelhead, along with river-resident trout, to be just as appealing.

Total spending by all anglers, resident and nonresident combined, for Southeast Alaska in 2007 was estimated to be $274 million. The total economic output came to $295 million, which supported 3,063 jobs and generated $22 million in state and local taxes.



SOUTHEAST MARINE (SUBREGION)

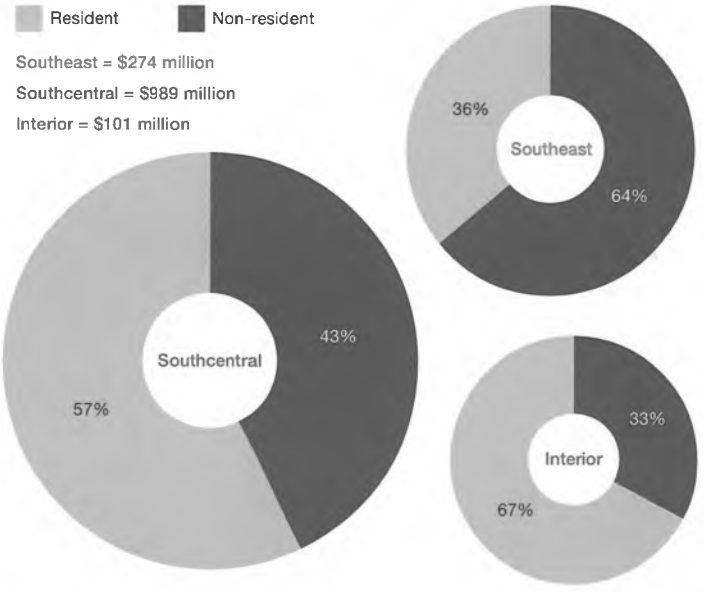
Within southeast Alaska, the popularity of salt-water fishing accounted for almost half of all angler spending. Saltwater anglers in southeast Alaska spent $132 million of the $274 million spent on sportfishing in southeast Alaska in 2007, which supported 1,897 jobs and created $14 million in state and local tax revenues.

SOUTHCENTRAL (REGION II)

This is by far the most popular angling region in Alaska as measured in total angler days. It includes Prince William Sound, Cook Inlet and the Anchorage area, as well as Kodiak Island and the Bristol Bay area to the west of Cook Inlet. All five salmon species are fished widely here in both salt- and fresh-water, along with halibut and other saltwater species. Trophy rainbow trout in the various Bristol Bay drainages are world-famous.

Anglers spent $989 million in the Southcentral region in 2007, supporting 11,535 area jobs and creating $91 million in state and local taxes.

RESIDENT AND NONRESIDENT EXPENDITURES BY REGION



Economic measures reported in this chart are based on regional IMPLAN model outputs using 2007 angler expenditures.







For More Details...

This report is a summary of a 300 page technical report available free from the Alaska Department of Fish and Game, Division of Sport Fish. The complete report presents detailed descriptions of the methods and data sources used in the study, as well as the complete results. Visit ***www.sf.adfg.state.ak.us/statewide/economics*** *to download a copy in PDF form. You may also contact the Department at (907) 267-2366, or william.romberg@alaska.gov, to request a printed copy of the report.*

Regional Economic EFFECTS *(cont.)*

COOK INLET (SUBREGION)

Notably, much of Southcentral's economic activity centers around the Cook Inlet area, partly because Anchorage and the Matanuska-Susitna valley are such large population centers with good fishing nearby. The Kenai River, for example, is an easy drive from Anchorage and is widely known among anglers as one of the world's foremost salmon rivers. In addition, there are large sport fisheries for halibut and other groundfish that are accessed from several communities that border Cook Inlet. In the Cook Inlet subregion alone (a subset of Southcentral region), anglers spent about $733 million in 2007, which supported 8,056 jobs and generated $55 million in state and local taxes.

INTERIOR (REGION III)

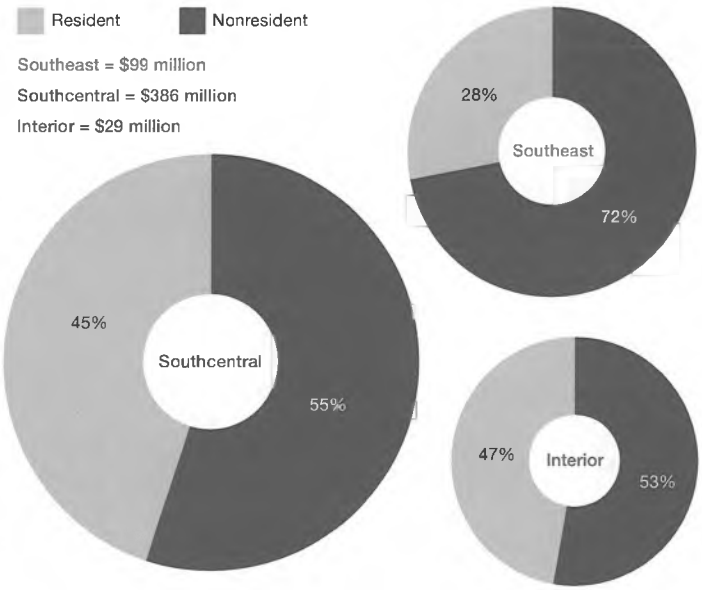
Among anglers, the northern two-thirds of the state could be called the road less traveled. This vast area contains many small communities and sport fisheries located off the road system with fisheries less accessible than places farther south in the state. However, the fishing is none the less exceptional, and in addition to salmon and trout there are fisheries for unique species such as sheefish, arctic char, and burbot, as well as huge northern pike found in the "flats" region of the lower Yukon River.

Angling traffic here is lighter than in other regions of the state but still significant. Total regional spending by all anglers in this region topped $101 million in 2007 and directly or indirectly supported 923 area jobs and $7 million in state and local taxes.

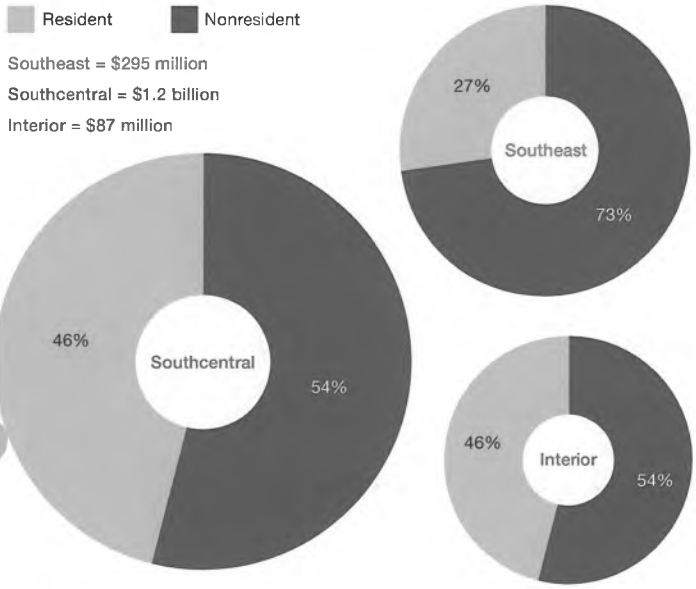
Total Angler Expenditures

$1.4 Billion

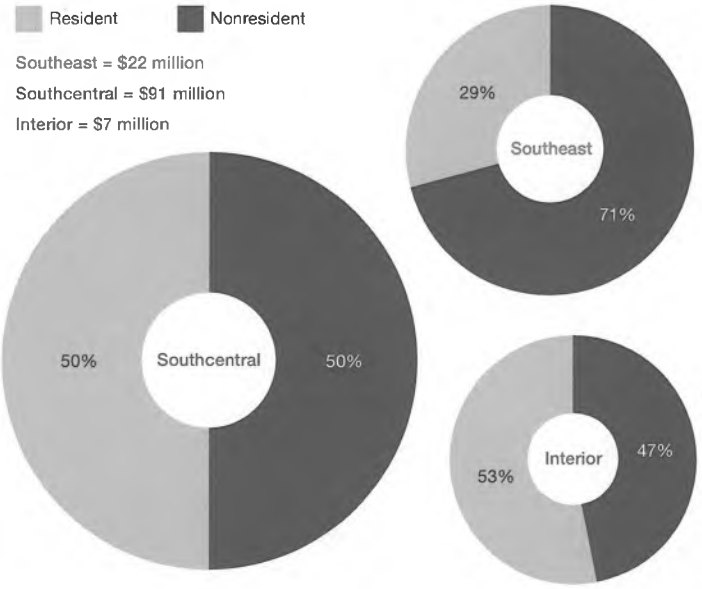
RESIDENT AND NONRESIDENT INCOME BY REGION



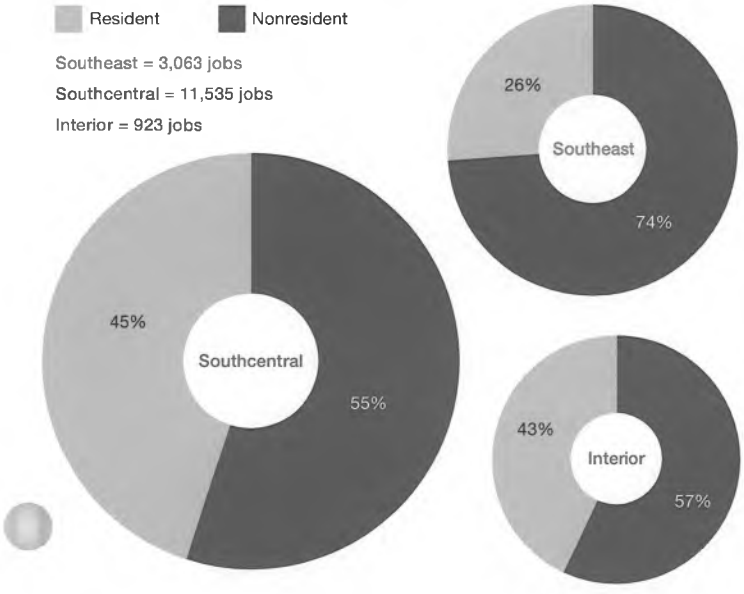
RESIDENT AND NONRESIDENT OUTPUT BY REGION



RESIDENT AND NONRESIDENT STATE & LOCAL TAX REVENUES BY REGION



RESIDENT AND NONRESIDENT EMPLOYMENT BY REGION



Sportfishing-related Jobs

15,879

Economic measures reported in these charts are based on regional IMPLAN model outputs using 2007 angler expenditures.

See page 11 for definitions of terms used on this page.

Economic Contributions of Sportfishing in Alaska, by Residency & Region, 2007

	Resident Anglers	Nonresident Anglers	All Anglers
ALASKA - STATEWIDE RESULTS			
Anglers' expenditures	$733,289,349	$652,498,723	$1,385,788,072
Output	$668,729,829	$938,863,856	$1,607,593,685
Income	$223,373,937	$321,882,151	$545,256,088
Jobs	6,442	9,437	15,879
Tax Revenues	$107,433,533	$138,881,701	$246,315,114
Local & State	*$56,509,573*	*$66,632,831*	*$123,142,404*
Federal	*$50,923,959*	*$72,248,870*	*$123,172,709*
SOUTHEAST REGION			
Anglers' expenditures	$98,613,993	$174,890,811	$273,504,804
Output	$79,385,025	$215,874,985	$295,260,010
Income	$27,316,008	$71,825,686	$99,141,694
Jobs	791	2,273	3,063
Tax Revenues	$12,227,368	$31,368,564	$43,595,932
Local & State	*$6,376,236*	*$15,686,783*	*$22,063,019*
Federal	*$5,851,132*	*$15,681,782*	*$21,532,913*
SOUTHCENTRAL REGION			
'ers' expenditures	$560,955,071	$427,603,048	$988,558,119
Output	$534,838,006	$630,707,507	$1,165,545,513
Income	$174,829,996	$211,633,737	$386,463,733
Jobs	5,170	6,365	11,535
Tax Revenues	$86,563,199	$93,692,068	$180,255,267
Local & State	*$45,612,530*	*$45,187,101*	*$90,799,631*
Federal	*$40,950,668*	*$48,504,967*	*$89,455,636*
INTERIOR REGION			
Anglers' expenditures	$67,092,727	$33,467,910	$100,560,637
Output	$40,133,830	$46,578,879	$86,712,709
Income	$13,263,706	$15,300,176	$28,563,882
Jobs	399	524	923
Tax Revenues	$6,710,270	$6,708,875	$13,419,146
Local & State	*$3,825,310*	*$3,396,831*	*$7,222,141*
Federal	*$2,884,961*	*$3,312,044*	*$6,197,005*

Output = total economic activity generated by angler spending
Income = salaries, wages, employee benefits and proprietors' profits stimulated by anglers
Jobs = same as employment, these are the total number of both full-time and part-time jobs supported by angler spending
Tax Revenues = the total personal and business tax revenues earned by local, state, and federal government that are generated by angler spending

Economic Contributions of Sportfishing for Specific Subregions, 2007

	Resident Anglers	Nonresident Anglers	All Anglers
COOK INLET (A SUBREGION OF THE SOUTHCENTRAL REGION)			
Anglers' expenditures	$457,938,464	$275,030,511	$732,968,975
Output	$413,287,612	$414,602,226	$827,889,838
Income	$136,650,136	$142,124,416	$278,774,552
Employment	4,010	4,046	8,056
Tax Revenues	$67,097,024	$44,445,496	$111,542,520
Local & State	*$35,189,444*	*$20,091,926*	*$55,281,369*
Federal	*$31,907,580*	*$24,353,570*	*$56,261,150*
SOUTHEAST REGION - MARINE FISHING ONLY[†]			
Anglers' expenditures	$21,268,271	$110,345,177	$131,613,448
Output	$28,244,412	$138,794,141	$167,038,552
Income	$9,132,220	$44,692,671	$53,824,891
Employment	301	1,595	1,897
Tax Revenues	$4,791,024	$21,577,534	$26,368,559
Local & State	*$2,713,584*	*$11,473,357*	*$14,186,941*
Federal	*$2,077,440*	*$10,104,178*	*$12,181,618*

Output = total economic activity generated by angler spending
Income = salaries, wages, employee benefits and proprietors' profits stimulated by anglers
Jobs = same as employment, these are the total number of both full-time and part-time jobs supported by angler spending
Tax Revenues = the total personal and business tax revenues earned by local, state, and federal government that are generated by angler spending
[†]The contributions are for trip spending only, including travel packages. It was not possible to allocate equipment and real estate expenditures by type of water fished.

Definitions of Terms Used in this Report

Angler Expenditures: the dollars spent for the primary reason of sportfishing. Such expenditures include trip-related expenses for fishing (fuel, guide services, lodging, etc.), fishing tackle and other fishing equipment, the portion of ancillary equipment used for fishing that may have multiple uses (e.g., coolers, binoculars), and real estate maintenance and construction expenditures if used primarily for the pursuit of sportfishing.

Total Multiplier Effect (also known as Total Economic Activity): the results (measured in output, income, jobs and taxes) of the total rounds of business and consumer spending stimulated by anglers' original expenditures.

Income: generated as a result of anglers' expenditures, this includes total payroll, including salaries and wages, as well as benefits such as insurance, and retirement benefits paid to employees and business proprietors.

Employment: the total number of both full-time and part-time jobs supported as a result of anglers' expenditures.

Tax Revenues: the total tax revenues earned by local, state and federal governments as a result of anglers' expenditures. All forms of local, state and federal taxes are included.

ACKNOWLEDGEMENTS

Funding for this study was provided by the Alaska Legislature which approved a $229,800 Fish and Game Fund increment and a $200,000 General Fund increment to the Division of Sport Fish FY-2008 budget. The Division of Sport Fish would like to thank Southwick Associates for their dedicated work on this project as well as the many anglers and guide businesses who participated in this study by providing detailed information on their sportfishing-related expenditures in 2007.

Southwick Associates, based in Fernandina Beach, FL, was founded in 1989 to serve state fish and wildlife agencies and the sportfishing and hunting industries. From our north Florida offices, we continue to serve this core group, and now provide economic and business intelligence to many more.

SOUTHWICK ASSOCIATES
FISH AND WILDLIFE ECONOMICS AND STATISTICS

Citation: Economic Impacts and Contributions of Sportfishing in Alaska, Summary Report 2007. Alaska Department of Fish and Game, Division of Sport Fish. January, 2009. Anchorage, Alaska.

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Economic Values of Sport, Personal Use, and Commercial Salmon Fishing in Upper Cook Inlet

(Quick Reference)

KENAI RIVER SPORTFISHING ASSOCIATION

PARTICIPATION

- 160,000 anglers—Alaskans and visitors—sport fish for salmon, and 20,000 Alaskans harvest salmon for personal use in Upper Cook Inlet recreational salmon fisheries each year.
- 1,375 to 2,500 individuals are seasonally employed in commercial salmon harvesting and processing or have jobs arising indirectly from the effects of commercial harvest and processing activity in Upper Cook Inlet.
- Sport and personal use salmon fishing in Upper Cook Inlet account for well over one-third (37%) of all recreational fishing in Alaska.
- Upper Cook Inlet accounts for 2% of the total statewide commercial salmon catch.
- Cook Inlet commercial salmon fisheries have substantially lower yields and substantially higher rates of permits not fished than comparable fisheries.

ECONOMIC SIGNIFICANCE

- Recreational salmon fishing in Upper Cook Inlet generates 3,400 average annual jobs producing $104 million (2006 dollars) in income.
- Commercial salmon fishing in Upper Cook Inlet generates between 275 and 500 average annual jobs producing between $10 and $18 million (2006 dollars) in income.
- The average commercial salmon harvest size in Upper Cook Inlet from 2002 to 2006 is greater than the average harvests over the past ten and past fifty years.
- The current (2000-2006) value of Upper Cook Inlet commercial salmon harvests is 14% of the highest historic value (1986-1992) and 39% of the most recent decade (1991-2000).

NET ECONOMIC VALUE (NEV)

- The average value over and above expenses that individual Alaskans place on their annual recreational fishing is $776 (2006 dollars).
- The net economic value of recreational salmon fishing in Upper Cook Inlet to Alaskans and visitors is $115 million (2006 dollars)—almost half (47%) of the statewide net economic value total—with $62 million of that total going to Alaskans.
- The net economic value of Upper Cook Inlet commercial salmon fishing to all permit holders—Alaskans and non-residents—is less than $1 million.

FUTURE TRENDS

- Demand for recreational fishing opportunities in the Cook Inlet boroughs is expected to continue to grow by 2.3% per year through 2011—a net increase of almost 29,000 anglers over 2002-2006 levels.
- Salmon farming and globalization of seafood markets will continue to exert downward pressure on prices and values in all of Alaska's commercial salmon fisheries.

ECONOMIC IMPACTS

- Institute of Social and Economic Research (ISER) study models from the mid-1990s suggest that at current commercial prices and values, increasing sockeye salmon allocations for sport fishing in Upper Cook Inlet would generate overall economic gains in the region.

ALLOCATION

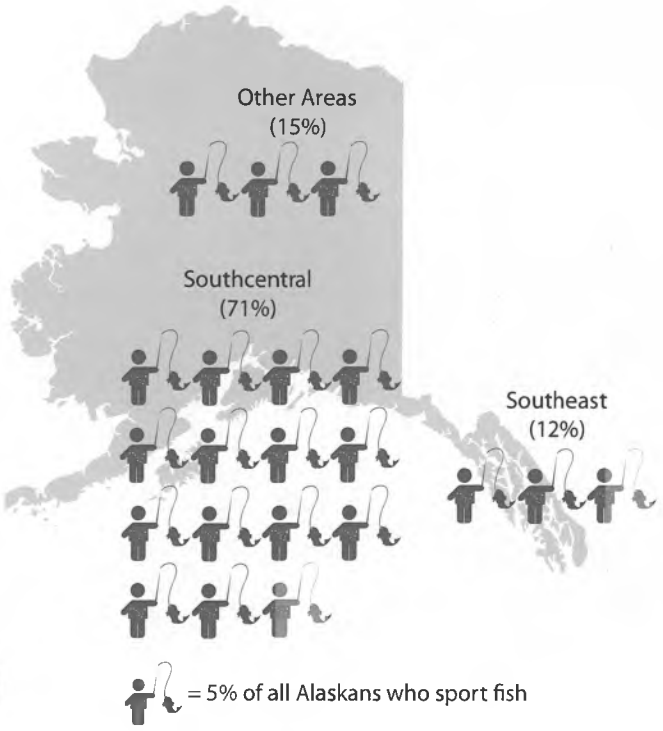
- Commercial fisheries are currently allocated 82% of the Upper Cook Inlet salmon harvest, while sport and personal use fisheries are allocated 18% of the harvest.
- In Alaska 2% of the total salmon harvest is allocated for recreational use. For allocations in Alaska to be comparable with other North American Pacific salmon fisheries, allocation rates for recreational fishing would need to be increased two (200%) to five (500%) times.

Full report available at www.kenairiversportfishing.com

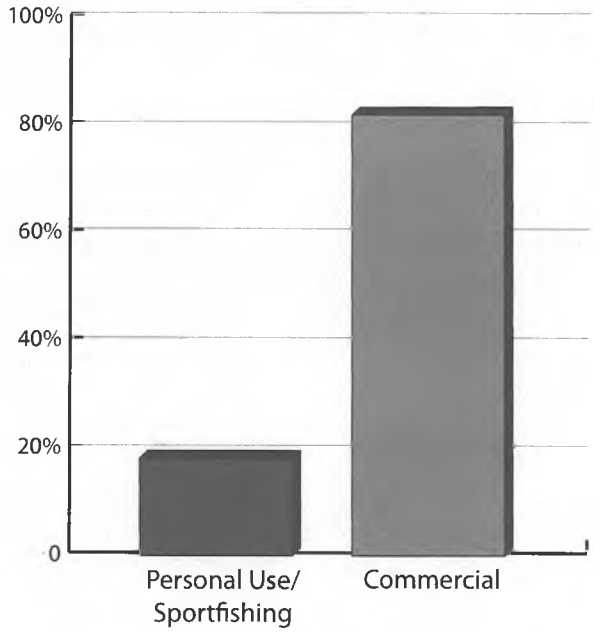
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Economic Values of Sport, Personal Use, and Commercial Salmon Fishing in Upper Cook Inlet

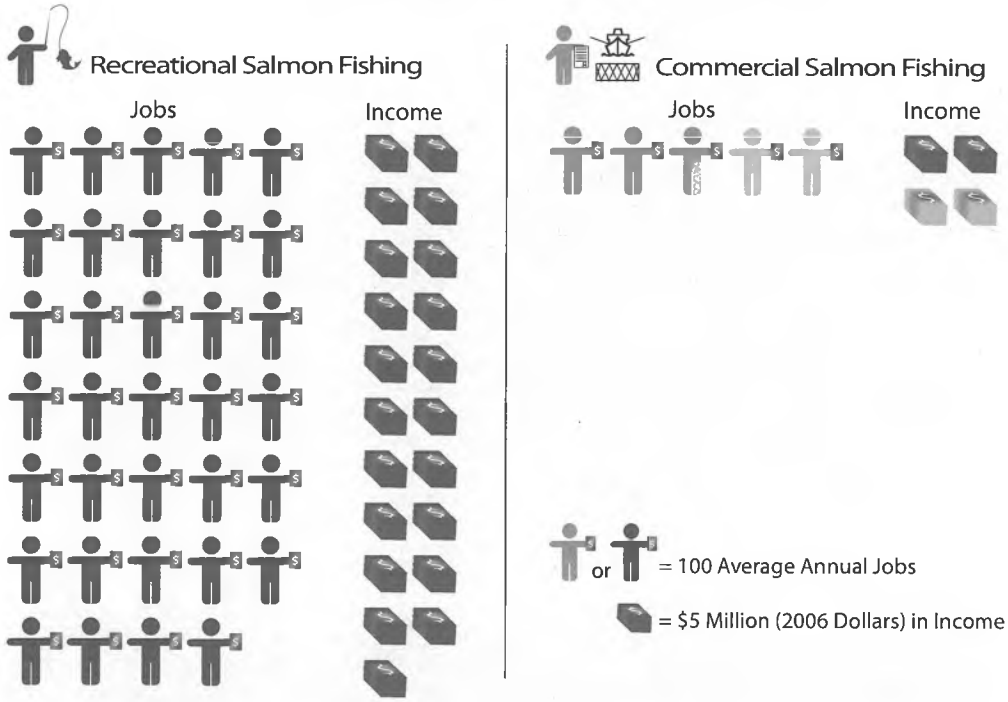
Percentages of Alaskans Who Sport Fish by Region of Residence



Allocation of Upper Cook Inlet Salmon Harvest by User Group, 2002-2006



Average Annual Jobs and Income Generated by Salmon Fishing in Upper Cook Inlet by Harvest Type



Sport Fishing Guide Services Board – SB24 Quick Reference Chart

The purpose of this Act is to promote the health, safety, and welfare of the guided fish angler and the stability of the sport fish guide industry in the state by regulating the activities of providers of sport fishing guide, outfitter, and transportation services.*

Requirement	Current Guide Regulation	Post Guide Bill Approval			
		Guide	Assistant Guide	Outfitter	Transporter
• A current Alaska sport fishing license, tags, stamps or permits that are required to engage in the sport fishery	✓	✓	✓	✓	✓
• A current sport fishing guide license	✓	✓	✓	✓	✓
• A current U.S.C.G. Operator's license if operating a motorized vessel on navigable waters and current TWIC card	✓	✓	✓	✓	✓
• Current first aid card.	✓	✓	✓	✓	✓
• Be a resident of the United States, Canada, Mexico or a resident alien	✓	✓	✓	✓	✓
• Assistants, deckhands, and similar persons are exempt from the guide licensing requirements.	✓				
• A copy of the current ADF&G sport fishing business license of the guide's employer	✓				
• A Photo ID	✓	✓	✓	✓	✓
• All businesses must have a logbook.	✓	✓			
• Current State of Alaska Business License	✓	✓		✓	✓
• Insurance - liability or marine protection policy providing coverage of at least $100,000 for each incident, and $300,000 per year	✓	✓		✓	✓
• All vessels, powered and unpowered, must have a current AK # issued by the DMV	✓	✓		✓	✓
• A person may not receive or renew a license if his right to obtain or exercise the privileges granted by a sport fishing guide-outfitter, sport fishing outfitter, sport fishing assistant guide, or sport fishing transporter license or registration is suspended or revoked in this state or another state or in Canada or Mexico.		✓	✓	✓	✓
• Licensing responsibility falls under ADF&G	✓				
• Licensing responsibility falls under Department of Commerce, Community, and Economic Development.		✓	✓	✓	✓
• Provide employment agreement with guide-outfitter or passes certification course			✓		
• Written and oral qualification and certification examinations required		✓		✓	
• Board will establish sport fish guide Use-Units and registration requirements.		✓		✓	
• Provide an activity report on a form provided by ADF&G		✓		✓	✓
• Board renews licenses every two years		✓	✓	✓	✓
• Board will enforce regulations		✓	✓	✓	✓

Rev 1/27/11

* A full copy of the Guide Services Bill, (SB-24) can be found here:
http://www.legis.state.ak.us/basis/get_bill.asp?bill=SB%20%2024&session=27

Note: This comparison is made to the working copy of SB-24 as of January, 2011. Final legislation may vary in content and requirements from this document. Please refer to the final bill upon passage for detail regulations.

SB 24 – Quick Reference on Issues

Purpose: The purpose of SB 24 is to promote the health, safety, and welfare of the guided fish angler and the stability of the sportfishing industry in the state by regulating the activities of providers of sport fishing guide, outfitter, and transportation services. Primary goals include:

1. Assure that Alaska's sport fishing services continue to compete favorably in the marketplace with the best in the world.
2. Assure that, as the state's valuable fishery resources are invested in the sport fishing services industry, the State of Alaska is doing so as would a diligent investor in any business.

Problem Statement

- The sportfishing industry is not recognized by the State making it subject to harmful laws and regulations and ineligible for numerous programs that would support its sustainability and growth.
- There is no common sportfishing voice within the Alaskan governmental process.
- There are no ethical standards of conduct business practices, safety, or service excellence for the industry and certain segments have little regulation at all.
- There is no management or accurate accounting of the recreational, social, and economic values in the guided sportfishing industry.

Benefits: Industry Recognition

- Legitimizes the sportfishing profession and gives us a standing in the State's legislative/governing process.
    - Upon enactment, the "SPORTFISHING INDUSTRY" will be identified as the 4th largest contributor to the economy, i.e. creating $1.4B in economic value, providing 16,000 jobs, and lifeblood to our coastal communities.
    - Brings stability to the industry.
    - Provides a mechanism for sustainable growth.
- Shifts regulation of the industry from ADF&G to a Sport Fishing Guide Services Board established within the Department of Commerce, alongside other analogous industry groups.
- Brings other service providers (lodges, outfitters, unguided operations) into regulation alongside existing sportfishing guide requirements.
- Serves as a primary source of statistics and related information about the industry. For example, it permanently repeals the logbook's termination language in existing statutes, and provides a means to assess the recreational, social and economic values generated by the industry.
- Makes the industry eligible for numerous State sponsored marketing, education, financial, and development programs similar to other industry.
- Gives the sportfishing industry a focused voice within the legislative process.

Benefits: Industry Regulation

- Provides oversight to protect consumers to ensure the highest quality fishing experience. Through enactment of professional standards, it ensures ethical service excellence and customer safety by establishing codes of conduct, education, and safety standards and enforcement.
- Replaces a flawed federal Limited Access Program with one designed by and for the sportfishing industry.
- Regulation will boost the prestige of the sportfishing professions.
- Provides oversight to protect consumers to ensure the highest quality fishing experience.
- The standards of the profession will rise over time and consumers will receive a better fishing experience.
- Allows clients of sport fishing businesses an avenue to have their grievances heard.
- Ensures a) service excellence and b) safety by establishing codes of conduct, education, and safety standards and enforcement.

2/22/11 Industry Overview: Seafood Processing Sector

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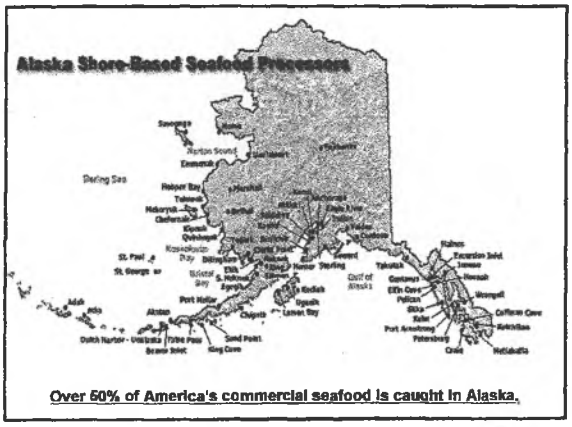
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Economic Engine for All Alaskans.

Alaska's Commercial Fisheries

- *If Alaska were a nation, it would be the 14th largest producer of wild seafood among seafood producing countries.*
- *Alaska produces 35 percent of the world's harvest of wild salmon.*
- *The harvest of Bering Sea pollock is among the largest single fisheries in the world.*

2



Over 60% of America's commercial seafood is caught in Alaska.

3



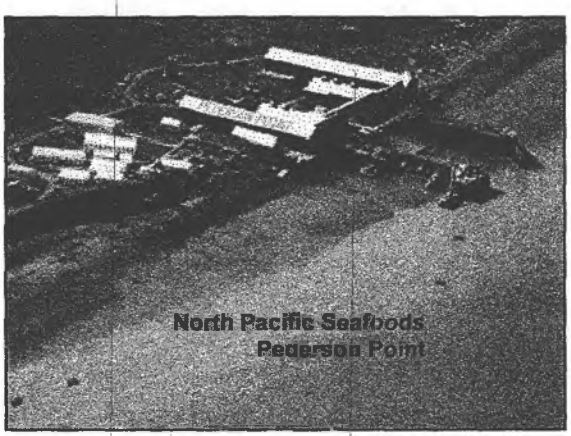
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Alaska Seafood is...

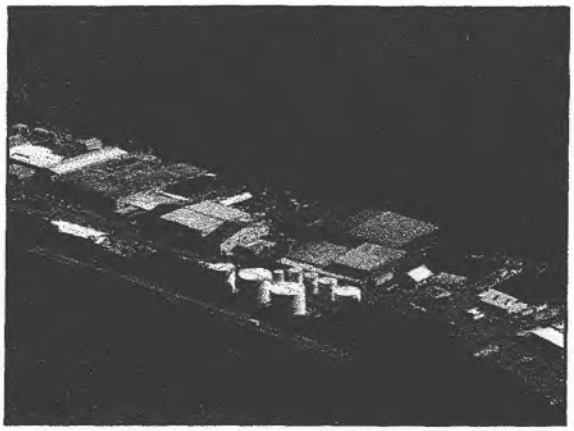
- worth approximately $5 billion annually to the Alaska economy in terms of direct, indirect, and induced economic output (Source: Northern Economics 2009)
- the state's largest private sector employer (Source AK DOL)
- Alaska's number one export (Source: AK Gov's Office of Intl. Trade)
- generates approximately $100 million in taxes and fees to state and local governments (Source: State of Alaska)



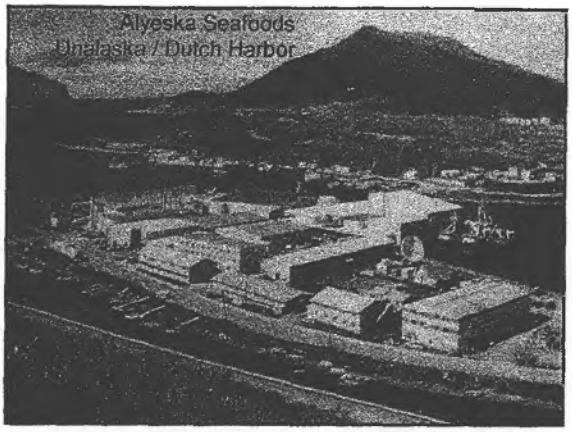
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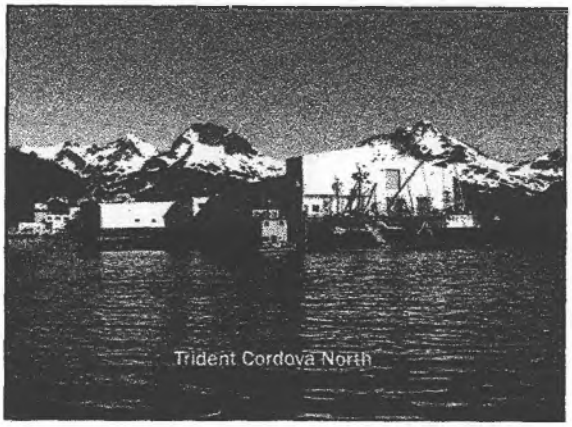
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Alyeska Seafoods
Unalaska / Dutch Harbor

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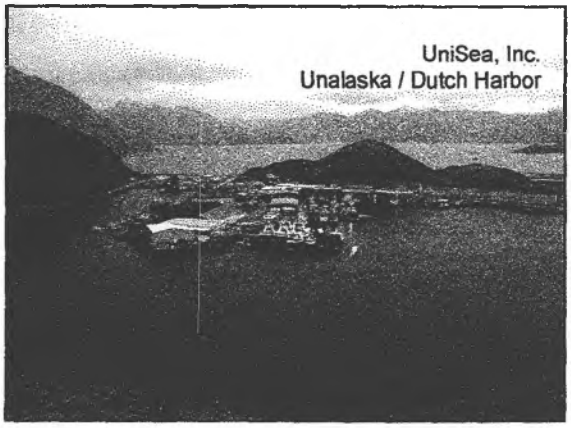
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Trident Cordova North

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UniSea, Inc.
Unalaska / Dutch Harbor

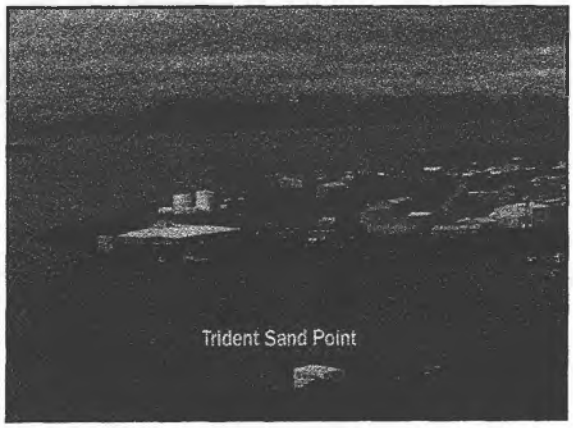
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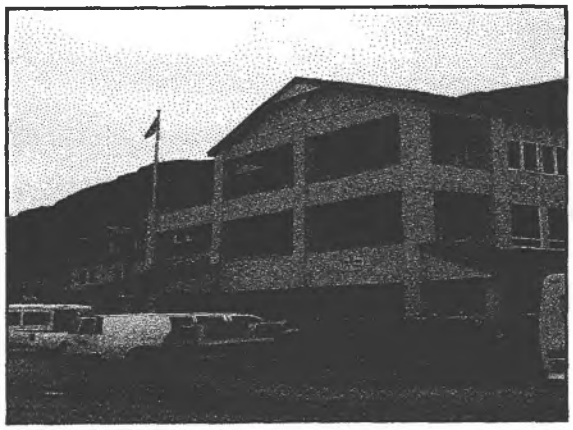
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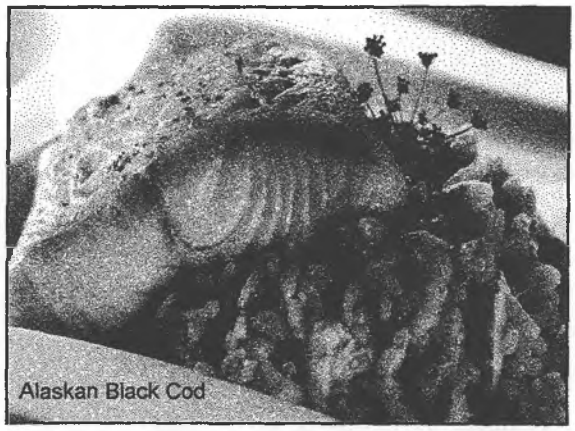
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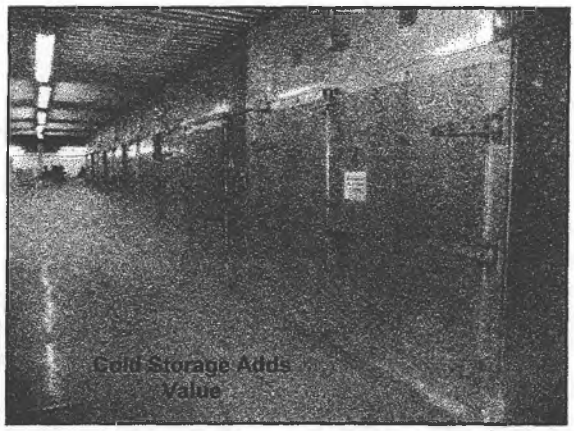
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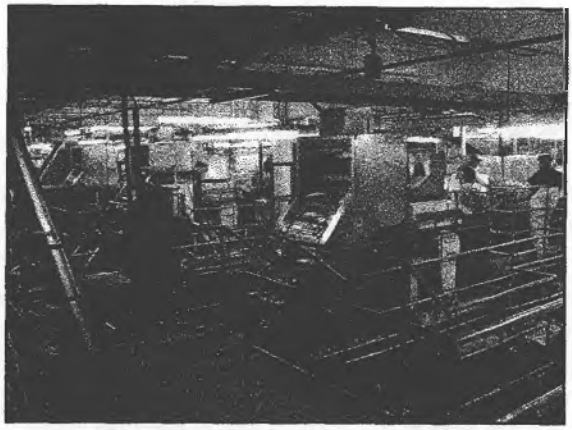
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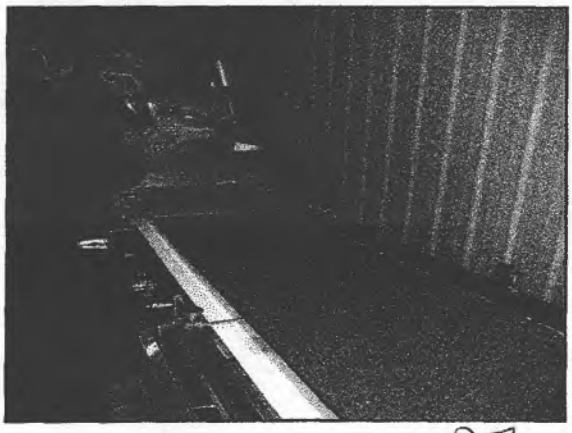
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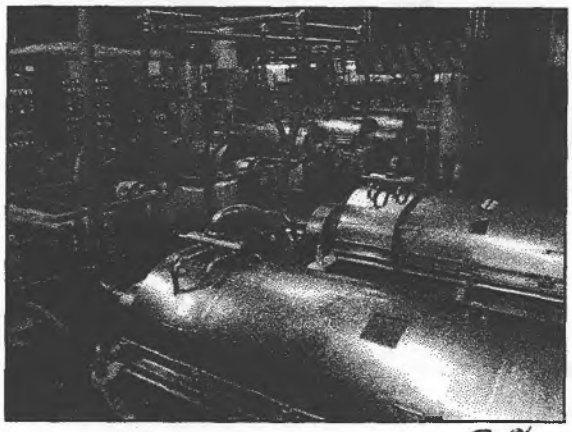
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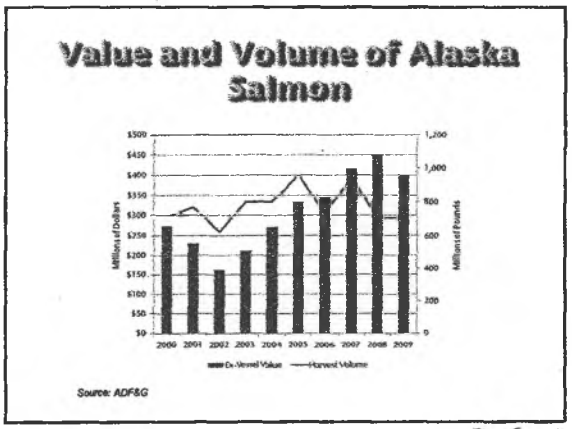
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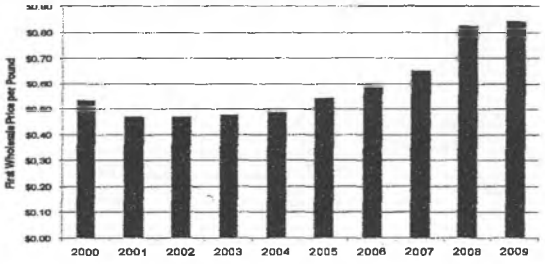
Seafood Industry Taxes

Alaska's seafood industry generates approximately $79 million in state taxes and fees annually, in addition to taxes paid to local governments.

Source: Northern Economics 2011

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Alaska is Realizing More Value per Pound of Seafood Sold



Source: ADF&G, NOAA, and McDowell Group Estimates.

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EMPLOYMENT

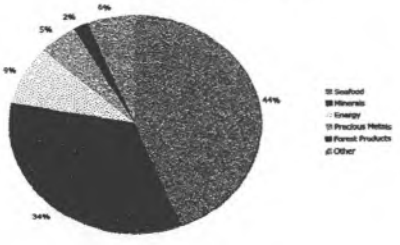
"Alaska's seafood industry is the largest private sector employer in the state, creating over 70,000 direct jobs and more than another 10,000 indirect jobs."

Source: Northern Economics: 2011

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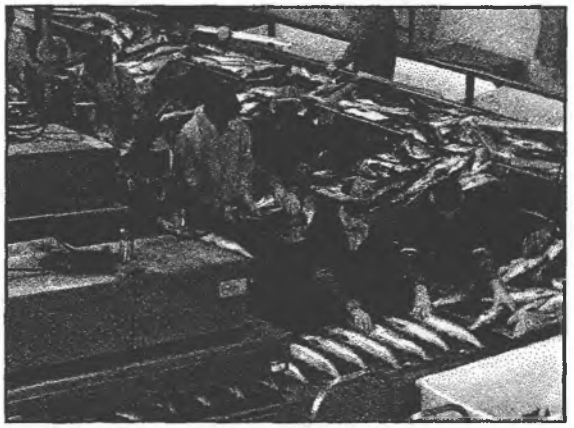
Alaska's Top Export Commodities

(Jan-Oct 2010)



Source: U.S. Census Bureau, SOA, Governors Office of International Trade

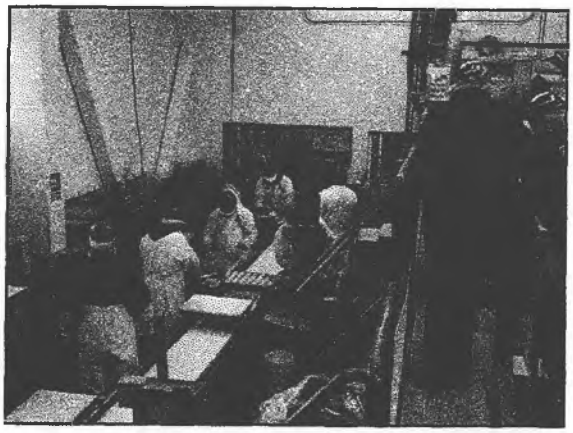
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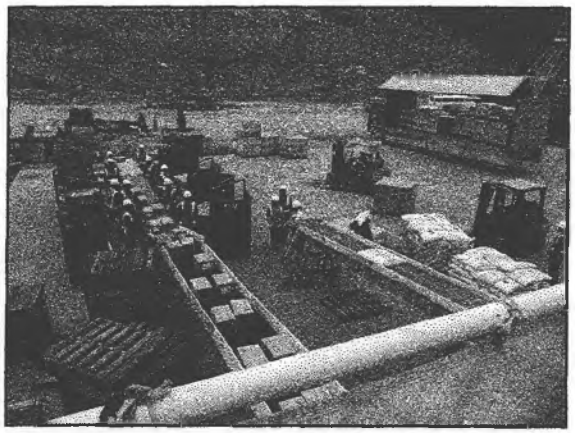
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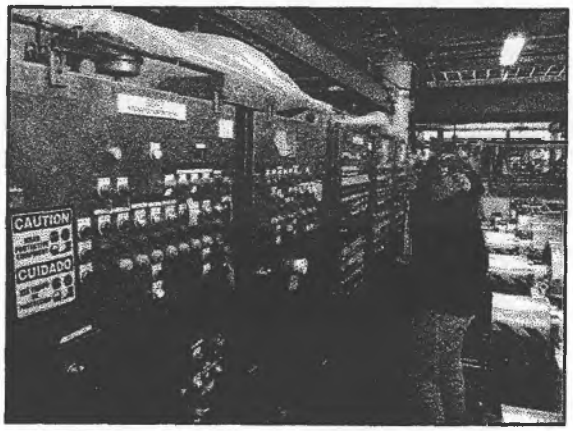
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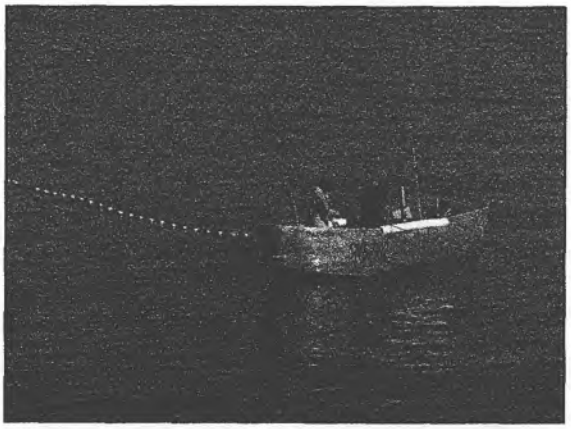
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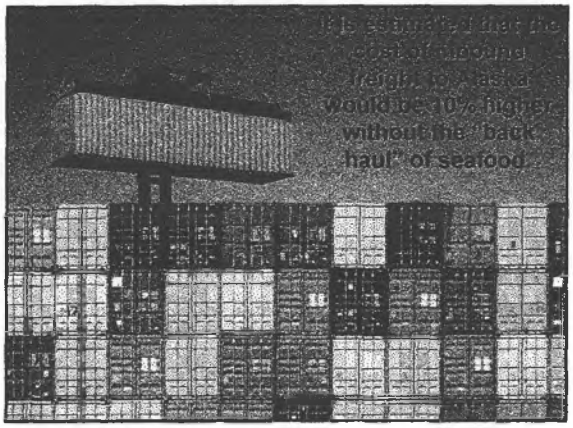
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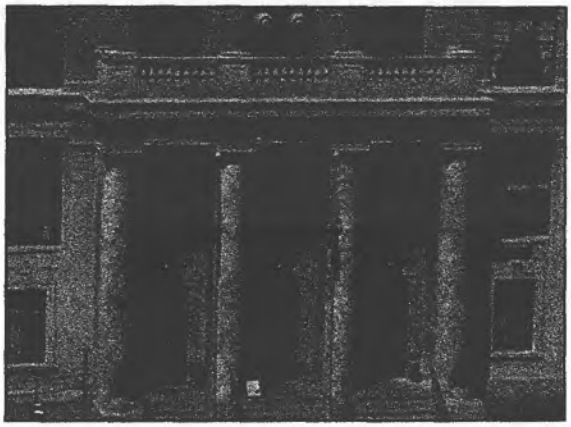
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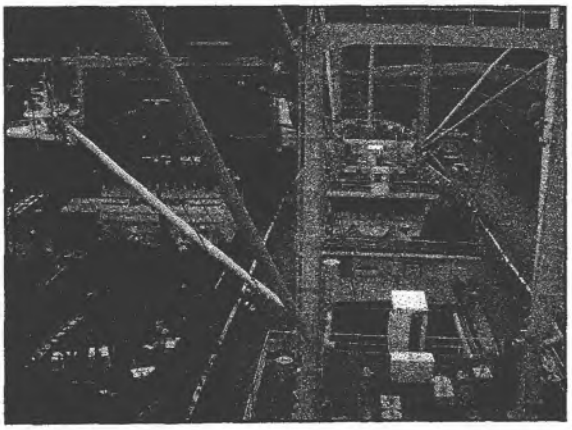
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Overview of Alaska's Seafood Processing Industry

Presentation to House Fisheries Committee
Feb. 22, 2011

By Pacific Seafood Processors Association
(Mary McDowell, Vice President, PSPA and
Glenn Reed, President, PSPA)

1 - (globe) Intro

Appreciate opportunity to speak to committee today.

PSPA is non-profit trade assoc. of seafood processing companies
Assoc. founded in 1914. (1-pager about PSPA in committee pkt)

Our membership primarily shore-based processing companies –
Companies with permanent, on-land facilities in Alaska.

2 – (map of AK with processor locations)
Today – provide brief overview of **1 sector** of seafood industry – **processing** sector
(with focus on shore-based processors)

This sector consists of facilities and operations that range from very small to very large, located throughout Alaska, primarily in coastal areas, and processes many species of fish and shellfish.

3 - (AK Seafood is..)
This sector is ONE player in a larger partnership that must be in place and functioning well in order for Alaska and Alaskans to benefit from the vast fishery resources of the state and off the state's shores

That partnership involves -- and *requires* -- efforts and success of:

- Harvesting sector – catch the fish & shellfish

  Note that committee scheduled to have overview of harvesting sector – by United Fishermen of Alaska -- on Thurs -- they'll provide further info about Alaska's commercial fisheries & harvesting sector.

- Processing sector – process the catch; develop products and markets; and sell the seafood

  Note -- besides shore-based processing that is focus of today's presentation,

  Processing sector also includes floating processors –vessels with processing facilities onboard.

  Fishing vessels deliver their catch to these vessels, and fish is then processed onboard

  AND there are Catcher-processors that both harvest and process fish at-sea.

Other parties in this "necessary partnership" include –

- Related and support businesses – shippers, distributors, and marketers;
  Fuel, refrigeration, electrical, and construction businesses;
  Boat yards; mechanics, so on

- Government – local, state and federal - for:

  Providing state's basic infrastructure – docks, harbors, roads, airports, etc
  AND
  Critical role of providing fisheries management, enforcement, and protection

- Mother Nature & providence – success depends on ocean conditions, weather, climate shifts, often-unpredictable fluctuations in fish stocks and run timing and strength -- from season to season, and week to week.

- And, finally, consumers -- the success of that end of partnership depends on many factors --- state of world economy, success of our marketing efforts, buying-power of key consumers,
  and efforts & success of competing seafood producers around the world
  AND of producers of other competing proteins – chicken, pork, other meats.

Clearly – seafood industry has lots of moving parts, players, and variables that are often beyond our control

It is a very challenging & high risk business.

Most seafood industry operations "out of sight" of major population centers of AK – so most Alaskans don't see it first hand

So, importance of industry to Alaska's overall economy often not recognized or well-understood, especially by those not directly involved, or not living in seafood-producing communities

Industry has great story to tell – anxious to tell it, show its contributions and great advances

Presentation will be quite general and basic -- plan to:

- Provide some info about the size of Alaska's seafood industry
  How Alaska ranks among seafood producing states and nations of the world

- Look at the seafood industry's long term investment in, and commitment to, Alaska
  Show some photos to give you a feel for what this industry looks like

- Talk a bit about the benefits and impacts of the industry on the state's overall economy & on AK communities ..... **not just** fishing communities, but all communities

- Wrap up with few comments on the industry's **partnership** with the state –
  What the state has done, and what still needs to be done by all of us --
  to help ensure Alaska will continue to benefit from its fishery resources and a strong seafood industry

Magnitude of Alaska seafood industry & important role it plays in state's economy

Slide on screen ---
Alaska Seafood --- including harvesting and processing – is

- worth approx. $5 billion *annually*
  (fluctuates year to year due to variables just mentioned)
- the state's largest private sector employer
- Alaska's number one export
- Generates approx. $100 million in revenues to state and local governments

4 – AK's Commercial Fisheries
Slide --

- If Alaska were a nation, it would place 14th among seafood producing countries.
- Alaska produces 35 % of the world's harvest of wild salmon
- The pollock and groundfish fishery of the Bering Sea is one of the largest fisheries in the world, by volume.

Both fishermen and processors must succeed -- in order for either sector to flourish --- and for our State and communities to realize the benefits and revenues from these resources.

"INVESTMENT"

Hear much about importance of having "investors/ investment" in Alaska

ALL resource development in Alaska – in both renewable and extractive resources – has required large amounts of outside capital.

Seafood processing is a risky business, defined by high volume and low profit margins

As Alaskans, we are fortunate we've been able to attract the investment necessary to develop and continue to expand and improve our seafood industry

5 – Westward Seafoods
Seafood industry represents huge & on-going investment & long term financial commitment in Alaska.

The seafood processing industry in AK is over 100 years old.

But has continued to modernize & grow.

In recent decades alone, industry has invested over a BILLION dollars in permanent, onshore facilities & continual upgrades & annual maintenance.

Will run through few photos for idea of what some facilities look like around the state.

Photos: 6, 7, 8, 9, 10, 11, 12, 13, 14

Sampling of some of our member companies' operations

Our members and other companies have many more operations of all sizes around AK

Shore-based processing ranges from "mom and pop" to large high-volume operations.

Broad geographic distribution – some in or near towns of various sizes; others in more remote, isolated locations.

Interiors of facilities impressive -- clean, modern, lots of activity, hundreds of employees.

Will get back to those aspects in a few minutes.

photos: 15, 16, 17, 18

Since many plants are in quite remote places --- or in communities without sufficient rental housing available to house large influx of workers needed for peak seafood seasons ....

Many plants must provide employee living and dining quarters – often for hundreds of employees.

----another significant investment and cost of being in the seafood business in Alaska

Besides physical plants -- seafood industry invests many millions (and takes financial risk) to develop and market new, value-added product forms and to constantly improve seafood quality

19 (seafood on plate)

This is critically important to keeping AK seafood competitive in world markets

Industry is proud of its investments and successes in Research and Development.

20 Today's consumers looking for more healthful and environmentally- responsible food.

AK seafood a good fit

21 But also looking for quality, price, value, and convenience

Industry working hard to meet these consumer demands.

22 **Look at Salmon --**

While continuing to produce best traditional salmon products in world --- including canned product seen here --

Photos of fillets & freezers

23 Industry also now selling large and growing portion of AK salmon as fillets , adding significant additional value to each pound.

24, 25

Has also developed hundreds of new value-added products -- salmon nuggets, patties, individual portions with sauces, etc.

26 – roe Also, produce various, high-value, forms of salmon roe (salmon eggs)

27 –*(chart: Value & Volume of AK Salmon)*

Bar chart -- no. of salmon harvested fluctuates from year to year, but because of efforts to meet consumer demands for quality & product form, and effectively market AK salmon -- -- the value of salmon has continued to rise. (ex-vessel value = dollars paid to fishermen)

28

Pollock fishery is another example of the industry efforts to add value and fully utilize harvested fish

Pollock is Alaska's largest volume fishery –industry produces fillets, block, mince, and many other value-added products

A significant amount of Alaska's pollock production goes into "SURIMI"

...which uses high-tech processing techniques that use nearly every particle of each pollock

The slide on screen shows pollock entering plant after being off-loaded from catcher vessel

Then goes thru series of steps ....

29 Here, being centrifuged to grind and pull moisture out of flesh

Thru these processes, pollock meat is turned into a protein paste,
then processed into many different, market-ready products.

30 ... one of those is "imitation crab" or "krab with a 'k'" , seen on salad bars, etc.

31 (Fish meal)

The parts of pollock that remain after utilizing meat for fillets or surimi (skins, organs, bones)
--- is turned into variety of high quality fish **meal** products

AND plants use the pollock oil as bio-fuel to help meet energy needs of their operations.

High cost of energy in AK, especially in rural AK, is major challenge for industry.

Have only touched on a some things happening in salmon and pollock processing
But Alaska's seafood industry also produces large quantities of high-quality
crab and other shellfish, halibut, cod, sablefish, many species of groundfish, and more.

Diverse industry – processing many species –
..... each requiring unique handling, processes, marketing

32 Chart – More Value per pound

All these efforts to add value and create products consumers want –
bring MORE value per pound of AK seafood harvested
(as shown in chart)

Statewide benefits of seafood processing industry

33 Export pie chart here

Seafood is **Alaska's LARGEST export product**

Important to state's overall economy – bringing in "new dollars" into economy,
not just "re-circulating dollars"

---

34 seafood tax revenues

And a revenue generator for state and local governments

Slide: "Alaska's seafood industry generates approximately $79 million in state taxes and fees annually, in addition to taxes paid to local governments."

35

And -- LARGEST PRIVATE SECTOR EMPLOYER in the state, providing over 70,000 direct jobs and generating more than 10,000 indirect jobs.

Slides: 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48

Seafood industry employs large numbers of workers to staff the processing lines,

but also employs people in huge array of other skilled and entry-level positions.

Understand members of committee have expressed interest / concern about numbers of non-resident workers in some parts of seafood industry

Understandable question.

Happy to discuss that – *and industry efforts to address it* -- at END of presentation or with indiv. legislators any time.

For now, just note that —

- thousands of Alaskans **are** employed in seafood processing
- the industry is constantly seeking to hire Alaskans
- and that ALL fishermen, and ALL Alaskans, benefit from these plants being able to fill their positions and get Alaska seafood processed.

Besides importance as exporter and tax payer ---

Seafood industry also supports **transportation system** of Alaska,
--- which benefits everyone

49 Southbound shipments..

Seafood industry transports thousands of workers and millions of pounds of supplies into and around Alaska

And ships millions of pounds of seafood out.

50 - freight containers

Without seafood providing a major "back haul" with shipping companies --

Alaskans would pay higher shipping costs for northbound freight

Major shippers estimate 10% higher rates across the state

That means ALL of us– even in non-fishing communities – would pay more for our groceries, building materials, household supplies, cars, etc
-- without a healthy seafood industy

Also – in many parts of state -- without seafood industry, transportation providers would not be profitable; likely provide less or no service to some communities.

Beyond overall economic benefits to state –

Additional, direct benefits at community level

Commercial fisheries are often referred to as the "economic engine" of coastal Alaska.

Seafood processors provide a market -- the payday -- for fishing fleets in these regions

51 - large vessels at dock --
Not just for medium-sized fishing operations, & large fishing vessels

52 Set net boat (leave on screen til capitol photo)

.....but also for very small-scale commercial fisheries –

fisheries that provide much-needed cash income in small communities & largely-subsistence areas of the state,
communities where other options for cash income can be scarce.

Another benefit to communities-- Tax Revenue

Processors pay local property and fish taxes

Often by far largest, or even ***only*** significant source of local tax revenues

& Plants are part of Alaska communities – providing :

- services to local fleets
- and often, scholarships to local students, fish to local school lunch or senior lunch programs, etc.
- In many communities, seafood plant employees are living, shopping, raising families, serving on local city councils, etc

---

As noted at beginning – STATE is a partner in making all this work

53 - capitol

We thank Legislature for past & current support for Alaska fisheries and seafood industry.

In addition to state's investment in overall infrastructure (transportation, etc) necessary for all businesses ---

- Alaska's fishery management is known as among best in world –

Has required legislative commitment to an adequately-funded, well-staffed Dept of F&G

- AK's fishery resources, and the habitat and waters they depend on
  among healthiest in world
  due, in large part, to the state requiring & enforcing protection of those resources

- In 1970's, legislature supported establishment of AK's Salmon enhancement Program to rebuild salmon runs depleted by years of poor federal management.

  Evolved into current private-non-profit hatchery program

  One of best-managed, most successful, fishery enhancement programs in world

  Plays important role in success of today's AK seafood industry

- In more recent years, legis passed "Salmon Product Development Tax Credit" ---
  & program extended again last session

  Small program; small cost to state,

  but provides extra boost to processors to go ahead & make sizeable investments necessary to develop new, value-added product forms, purchase new equipment, get new processes underway in their plants.

So, since statehood, AK government has adopted laws, regs, policies that have allowed the seafood industry to develop and become sustainable and strong.

NOW, and into future – What can legislature & other state and community leaders do to help ensure continued benefits of having a healthy seafood industry?

- #1 Sound management of fisheries and protection of water, fish, and fish-habitat

  Adequate funding of scientific research & ADF&G, DEC
  Incuding addressing recruitment/ retention of well-qualified staff

  Good, reliable, enforceable laws, regs, and processes
  For permitting and operations of all development projects

  Note: Alaska's pure water and environment, the purity of our seafood and the PERCEPTION of that purity – is key to marketability of Alaska seafood in today's markets.

- Continue providing for construction and maintenance of transportation infrastructure –

  Docks, harbors, airports -- for seafood industry, these are the "roads to resources"

  Need state support for programs like Municipal Harbor Facility Grant Fund

- Stable, reasonable regulatory environment –
  --fisheries management
  --standards, requirements for operations - air, water, food safety, etc

- Continued support for a strong salmon hatchery program

  With successful efforts to develop and market new, value-added salmon products .....

  Demand is high & growing

  Strong, steady supply of salmon is essential to meeting commitments and expanding markets.

- Continue to work to address high cost of energy in rural Alaska -- high energy costs are major challenge for seafood industry.

- State support for ASMI – state's contribution to partner with funding provided by industry itself helps ensure AK products promoted and successful in highly competitive world markets

- AND -- work with us to help inform all legislators and other policy makers & leaders, and the public throughout Alaska about seafood industry & importance to the whole state.

In conclusion –

- Alaska is a LARGE GLOBAL PLAYER in SEAFOOD
- This has taken LONG TERM COMMITMENT, & INVESTMENTS by the seafood industry

  & PARTNERSHIP with the State of Alaska..
- ALL Alaskans benefit from successful seafood industry and from policies that support it.
- The industry wants to continue to be GOOD CORPORATE CITIZENS OF ALASKA

  And GOOD PARTNERS with the STATE and PEOPLE of Alaska –

  to ensure the long term sustainability of Alaska's fishery resources

  & the benefits of having a strong seafood industry.

Industry always available to provide info, answer questions, & work with Legis on issues that affect our industry and the state.

We invite committee members to visit our member company plants around state to get first-hand, up-close look at seafood processing industry.

54 - Thank you -- happy to answer questions.

PSPA

PACIFIC SEAFOOD PROCESSORS ASSOCIATION
Est. 1914

What is PSPA?

Pacific Seafood Processors Association (PSPA) is a nonprofit trade association of seafood processing companies. PSPA member companies have operations in many locations throughout coastal Alaska, including Ketchikan, Wrangell, Petersburg, Sitka, Cordova, Valdez, Kodiak, Chignik, Port Moller, Sand Point, King Cove, Akutan, Unalaska/Dutch Harbor, St. Paul, Dillingham, Naknek, Pederson Point, and Togiak. Additionally, two of our member companies operate mother ships in the Bering Sea, providing opportunities for catcher vessels to deliver their catches at sea.

Our member companies purchase, process, and market hundreds of millions of pounds of salmon, pollock, crab, cod, and other species of Alaska seafood every year. They provide thousands of direct and indirect jobs in Alaska, markets to Alaska fishermen, and millions of dollars in tax revenues to Alaska communities and the State. Additionally, Alaska's seafood processing industry contributes to the economic well-being of all Alaska businesses and residents by helping contain shipping and transportation costs to, from, and within Alaska due to the large amount of goods and personnel transported to our operations in remote parts of the state and the enormous quantity of seafood product shipped south as "back haul" freight.

PSPA Member Companies:

- Alaska General Seafoods
- Alyeska Seafoods, Inc.
- Golden Alaska Seafoods, LLC
- North Pacific Seafoods, Inc.
- Peter Pan Seafoods, Inc.
- Phoenix Processor Limited Partnership
- Trident Seafoods, Inc.
- UniSea Inc.
- Westward Seafoods, Inc.

PSPA's Juneau Office:

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Phone: 907-586-6366
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Cell: 907-723-6366
Email: marym@pspafish.net

A COMMITMENT TO SUSTAINABILITY

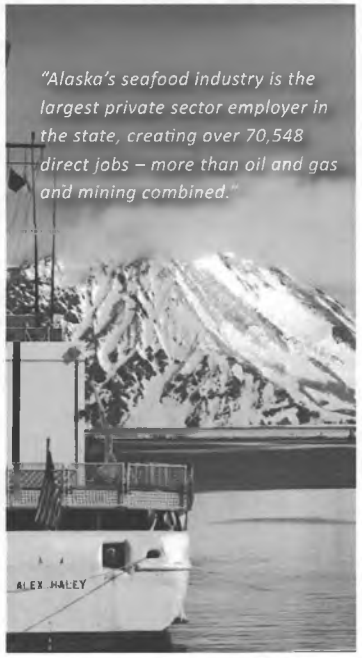
Wild fish stocks are a dynamic resource, subject to swings in abundance due to changes in climate, feed and other factors. Despite this, Alaska's Seafood Industry continues to earn superlatives due to a commitment to stewardship and sustainability. State and federal fishery managers set catch allocations at scientifically set levels to protect the resource. As a result, no stocks of groundfish are considered overfished. Key habitat areas are closed to protect the broader ocean ecosystem totaling more than five times the entire US National Park System. Alaska fisheries operated under limited access or catch share quota systems are now recognized as a key strategy to prevent overfishing. National Geographic recently listed Alaska as one of only three well-managed fisheries in the world, the others being Iceland and New Zealand.



Courtesy of ASMI and Shpilfish Dark



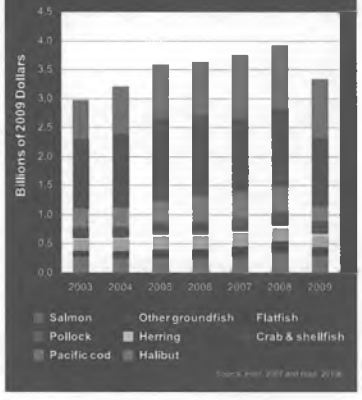
"Alaska's seafood industry is the largest private sector employer in the state, creating over 70,548 direct jobs – more than oil and gas and mining combined."



POSITIVE TREND

The inflation adjusted wholesale value of Alaska seafood has steadily increased over the past five years from $2.88 billion in 2003 to $3.3 billion in 2009, an increase of 15 percent. With continued science-based management, Alaska's seafood industry is a growing, sustainable and vital part of the Alaska economy

Real Wholesale Value by Species, 2003-2009



MARINE CONSERVATION ALLIANCE
Promoting sustainable fisheries to feed the World.

PSPA
Pacific Seafood Processors Association

APA AT-SEA PROCESSORS ASSOCIATION
Partners for Healthy Fisheries

February 2011

Alaska's Seafood Industry:

Global in stature; Leaders in the Nation; A Statewide Economic Engine That Drives Local Communities

MARINE CONSERVATION ALLIANCE
Promoting sustainable fisheries to feed the World.



F/V Mar Del Norte, Kodiak, AK
Courtesy of Alaska Groundfish Databank

Alaska's seafood – salmon, crab, pollock, halibut, cod and more – is one of the largest renewable resources in the world. Alaska's seafood production ranks 14th in the world and leads the nation's harvest from the sea. Raised wild and harvested sustainably, Alaska's quality seafood graces the finest white-tablecloth restaurants and satisfies appetites on the go at the corner fast-food outlet.

Alaska's seafood industry traces its heritage to the purchase of Russian America and it remains a vital part of the state economy today. The Alaska Seafood Industry is the state's largest private sector employer and the largest manufacturing sector; a multi-billion dollar economic engine that profoundly affects the state economy and reaches broadly from Alaska's urban centers to its smallest coastal communities.

GLOBAL STRUCTURE

At over 4 billion pounds annually, compared to other fishing nations, Alaska would be the fourteenth largest producer of wild seafood. The harvest of Bering Sea pollock and other Groundfish, capped at 2 million metric tons annually, is among the largest single fisheries in the world. Alaska also boasts 35 percent of the world's harvest of wild salmon. The 2010 salmon season was one of the best on record in terms of harvest and value, the 11th highest harvest since statehood. Alaska exports $1.6 billion of seafood annually to customers around the world including in Japan, China, Korea, Canada and Europe. Alaska fisheries are global in stature.



NATIONAL LEADERS

Alaska leads the nation in production of seafood with an annual harvest that was 52% of all seafood landed in the United States in 2009. Unalaska/Dutch Harbor has reigned as the nation's top fishing port in terms of volume for decades and it also ranks as the second top port in terms of ex-vessel value, the price paid fishermen for their catch.

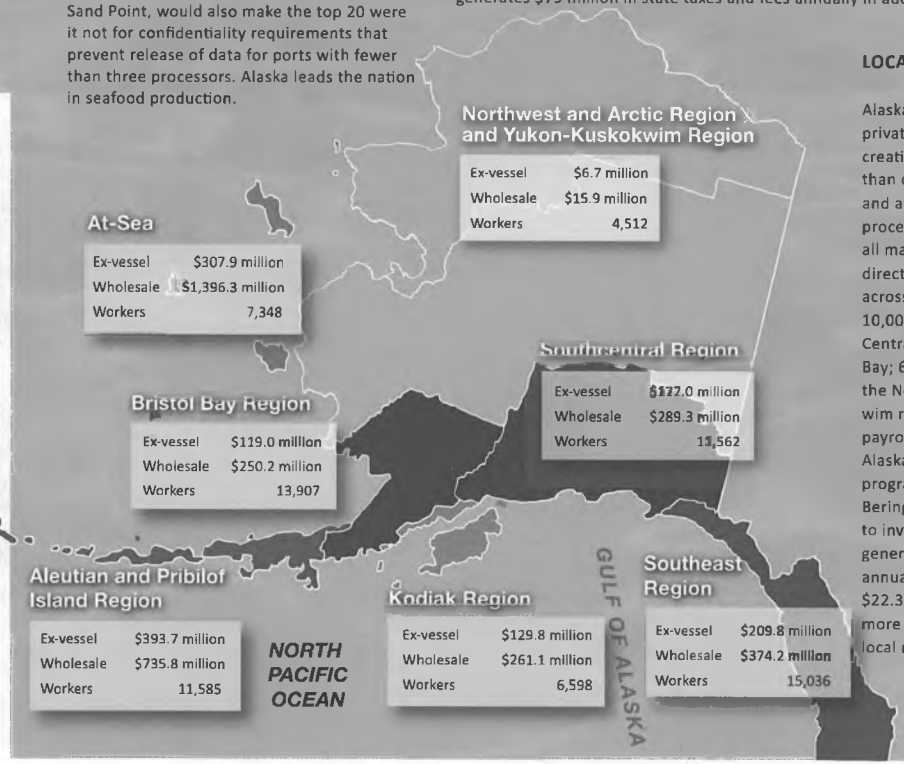
In all, eight Alaska fishing communities rank among the top 20 richest ports in the nation including Kodiak (number 3), Naknek-King Salmon (4), Sitka (5), Homer (12), Seward (17), Ketchikan (18), and Cordova (19). Three other Alaska ports, Akutan, King Cove and Sand Point, would also make the top 20 were it not for confidentiality requirements that prevent release of data for ports with fewer than three processors. Alaska leads the nation in seafood production.


Unalaska / Dutch Harbor, Alaska
Courtesy of Bob King


Photo Courtesy of the Alaska Seafood Marketing Institute

A STATEWIDE ECONOMIC ENGINE

The estimated ex-vessel value of Alaska fisheries, the price paid to fishermen, totaled $1.3 billion in 2009. The wholesale value of Alaska seafood is pegged at $3.3 billion plus $1.3 billion in indirect and induced economic output for a total of $4.6 billion to the Alaska economy. The value of seafood exports from Alaska exceeds that of mining or expenditures by the visitor industry and among other private sector industries is second only to oil and gas. Alaska's seafood industry generates $79 million in state taxes and fees annually in addition to local fish taxes.



LOCAL COMMUNITY DEVELOPMENT

Alaska's seafood industry is the largest private sector employer in the state, creating over 70,548 direct jobs – more than oil and gas and mining combined – and another 10,252 indirect jobs. Seafood processing accounts for over 71 percent of all manufacturing jobs in the state. These direct and indirect jobs are spread widely across the state including more than 10,000 jobs each in the Southeast, South Central, the Aleutian Islands, and Bristol Bay; 6,500 jobs in Kodiak and 4,500 jobs in the Northwest, Arctic, Yukon and Kuskokwim region, jobs with a combined annual payroll of over $1.45 billion. The Western Alaska Community Development Quota program, which allocates a portion of the Bering Sea catch for coastal communities to invest in economic development, generates over $180 million in revenues annually, employs 1,600 workers, pays over $22.3 million in wages, and invests millions more in training opportunities afforded local residents.

Table 1. Seafood Industry Employment by Region, 2009

Summary of Workers	Harvesting	Processing	Total
Aleutian and Pribilof Islands	5,309	6,276	11,585
Bristol Bay	9,385	4,522	13,907
Kodiak	3,664	2,934	6,598
Northern	627	68	695
Southcentral	8,071	3,491	11,562
Southeast	10,150	4,886	15,036
Yukon Delta	2,986	831	3,817
At-Sea	1,732	5,616	7,348
Total	**41,924**	**28,624**	**70,548**

Source: Northern Economics, Inc. and ADOLWD, 2010.

Table 2. Estimated Seafood Ex-vessel Volume and Value by Region, 2009

Region	Harvest Weight (1,000 MT)	Ex-Vessel Value ($ Millions)
Aleutian and Pribilof Islands	497.2	393.7
Bristol Bay	86.6	119.0
Kodiak	157.2	129.8
Northwest/Arctic/Yukon-Kuskokwim	3.9	6.7
Southcentral	77.8	177.0
Southeast	134.4	209.8
At-Sea	883.0	307.9
Total	**1,840.0**	**1,343.8**

Source: Estimated by Northern Economics using NMFS (2010a), Hiatt (2010a) and Hiatt (2010b).

Table 3. Estimated Seafood Wholesale Volume and Value by Region, 2009

Region	Product Weight (1,000 MT)	Wholesale Value ($ Millions)
Aleutian and Pribilof Islands	180.9	735.8
Bristol Bay	48.6	250.2
Kodiak	72.9	261.1
Northwest/Arctic/Yukon-Kuskokwim	2.3	15.9
Southcentral	45.4	289.3
Southeast	81.1	374.2
At-Sea	457.0	1,396.3
Total	**888.1**	**3,322.9**

Source: Hiatt, 2010b

2011 report sponsored by the Marine Conservation Alliance

This is a 2011 update of the Executive Summary from the 2009 report "The Seafood Industry in Alaska's Economy". This report, as well as the 2011 update with full references is available at www.marineconservationalliance.org.

Also follow '**SeaAlliance**' on:

431 N. Franklin St. Ste 305 Juneau, AK 99801 | phone 907. 523.0731 | www.marineconservationalliance.org

MARINE CONSERVATION ALLIANCE

SEA FACTS

THE SEAFOOD INDUSTRY IN ALASKA'S ECONOMY

As a major player in global markets, Alaska's seafood industry is an economic engine for both the state and the nation. This publication updates "The Seafood Industry in Alaska's Economy", first published in 2009. It shows that the seafood industry continues to be the largest private sector employer in the state.

2011 Executive Summary Update

- Alaska led all states in terms of both volume and ex-vessel value of commercial fisheries landings in 2009, with a total of 1.84 million metric tons (MT) worth 1.3 billion dollars (NMFS 2010a).

- National harvest volume in 2009 was 3,568,599 MT (NMFS 2010a).

- In the list of top 50 U.S. ports based on volume for 2009, Alaska had 11 including Dutch Harbor-Unalaska (1st); Kodiak (4th); Naknek-King Salmon (11th); Sitka (14th); Ketchikan (15th); Petersburg (18th); Cordova (21st); Seward (26th); Homer (36); Juneau (41st); Kenai (50th) (NMFS 2010a).

- In the list of top 50 U.S. ports based on ex-vessel value for 2009, Alaska had 10; 8 of them were in the top 20. These ports include Dutch Harbor-Unalaska (2nd); Kodiak (3rd); Naknek-King Salmon (4th); Sitka (5th); Homer (12th); Seward (17th); Ketchikan (18th); Cordova (19th) (NMFS 2010a). Three other Alaska ports, Akutan, King Cove and Sand Point, would also make the top 20 were it not for confidentiality requirements that prevent release of data for ports with fewer than three processors.



Photo courtesy of ASMI

- In 2009, Dutch Harbor-Unalaska was the leading U.S. port in quantity of commercial fishery landings, and the second U.S. port in value of commercial fishery landings (NMFS 2010a)

- Dutch Harbor-Unalaska ranked second (after New Bedford, MA) with a harvest value of $159.7 million dollars; Kodiak was ranked third at $103.8 million, and Naknek-King Salmon ranked fourth at $76.1 million dollars (NMFS 2010a).

- The seafood industry, through direct, indirect and induced effects, contributed a total of $4.6 billion to Alaska's economic output in 2009.

Prepared by Northern Economics

Importance of Alaska to the Global Seafood Market

- If Alaska were a nation it would have placed 14th among seafood producing countries in 2008 (NMFS 2010b and FAO 2010).

- Alaska landings of global groundfish species groups (including cod, pollock, hake and haddock) and flatfish accounted for 18 percent of the world harvest of these species groups in 2008 (Hiatt, et al. 2010 and FAO 2010).

- In 2008 about 35 percent of the world capture production of species in the "salmon, trout, smelt" group occurred in Alaskan waters (Hiatt, et al. 2010 and FAO 2010).

- Alaska accounted for 95 percent of total U.S. pacific salmon landings in 2009 (NMFS 2010a).

- The 2010 salmon season was one of the best on record with almost 170 million fish harvested in Alaska, the 11th highest number since statehood. Preliminary 2010 estimates show that the salmon harvest generated $533.9 million, the highest ex-vessel value in eighteen years (since 1992) (ADF&G 2010).

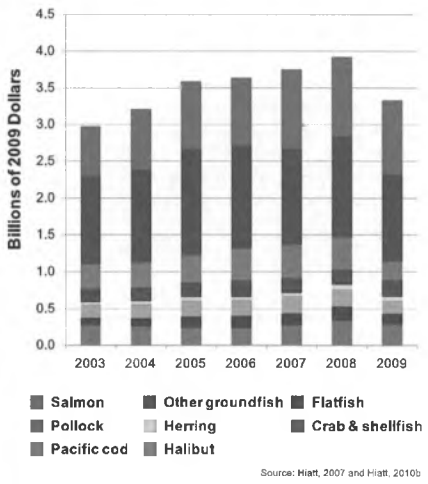
- In 2009, $1.6 billion dollars worth of seafood was exported directly from Alaska to destinations such as Japan, China, South Korea, Canada, and Europe (Office of the Governor of the State of Alaska 2009, NOAA 2010a).

- In 2009 Japan was the leading direct importer of Alaska fish and fisheries products (by value) followed by China, South Korea, Germany, the Netherlands and Canada (NOAA 2010a).



Photo Courtesy of PSPA

Real Wholesale Value by Species, 2003-2009



Source: Hiatt, 2007 and Hiatt, 2010b

Importance of Alaska Seafood to the U.S.

- In 2009, Alaska accounted for over 52 percent of the volume of the commercial seafood harvested in the United States (NMFS 2010a).

- Alaska as a single state led all other multi-state regions in the U.S. in terms of ex-vessel value with over 34 percent of the U.S. total (NMFS 2010a).

- The five New England States combined for a distant second with 20 percent, followed by the five states on the Gulf of Mexico with 16 percent (NMFS 2010a).

- Alaska's pollock fishery is the largest in the U.S., accounting for 24 percent of total U.S. fisheries landings (NMFS 2010a).

- In 2009, 26 percent of total U.S. crab catches were king and snow (tanner) crab, and they accounted for 35 percent of total U.S. crab value (NMFS 2010a). King and snow crab come entirely from Alaska.

- Dutch Harbor-Unalaska holds the record for catch volume with 911.3 million pounds landed in 2006 (NMFS 2010a).

- Alaska landings of Pacific Sea Herring accounted for 98 percent of the Pacific coast with 87 million pounds valued at over $29.3 million (NMFS 2010a).

Importance of Alaska Seafood to Alaska

- In 2009 total estimated ex-vessel value of Alaska's commercial harvest was $1.3 billion (NMFS 2010a).

- The additional value added by Alaska's seafood processing sector brought the first wholesale value of Alaska's commercial seafood industry to over $3.3 billion in 2009 (Hiatt et al. 2010).

- It is estimated that the seafood industry's $3.3 billion in wholesale value generated an additional $1.3 billion in indirect and induced economic output for a total contribution of $4.6 billion to Alaska's economic output (NEI using Hiatt 2010b, NOAA 2010b, Mothership Fleet Cooperative 2010 and IMPLAN 2009 data).

- The seafood industry also generated more than 80,800 direct, indirect, and induced jobs and $1.45 billion in direct, indirect and induced payments to labor and income (NEI using Hiatt 2010b, NOAA 2010b, Mothership Fleet Cooperative 2010 and IMPLAN 2009 data).

- In 2009 the wholesale value generated by the seafood industry represented over 10 percent of the $34 billion basic sector activity in Alaska's economy (Hiatt 2010b, Office of the Governor of the State of Alaska 2009, U.S. Census Bureau 2010 & 2011, ADOR 2011, McDowell 2010, and Szumigala 2010). The basic sector, because it brings money into the state from outside, is the driving force behind all economic activity in the state.

- The seafood industry ranks third in importance behind the North Slope oil and gas industry and federal government in terms of generating basic economic activity in Alaska (NEI using ADOLWD 2010 and ADOLWD 2011a).

- Alaska's seafood industry generated about $79 million in state taxes and fees, in addition to local fish taxes in fiscal year 2009 (ADOR 2009; ADCCED 2011).

- Seafood was Alaska's leading export in 2009 and accounted for 50 percent of total direct exports—nearly double the value of the second highest export sector (minerals at 26 percent), (U.S. Census Bureau 2010). Total Alaskan seafood exports were even greater; a large portion of Alaskan seafood is exported internationally from packaging and storage facilities in Washington.

- In 2009, seafood processing accounted for about 95 percent of all food manufacturing jobs in Alaska, and 71 percent of total manufacturing jobs (ADOLWD 2010 and ADOLWD 2011b).



Photo courtesy of Ron Clarke

- With an estimated harvesting and processing workforce of 70,548, the seafood industry employs more workers than any other non-government industry sector in Alaska, including oil and gas and mining combined. The trade, transportation and utilities sector follows with a workforce of 63,300 (ADOLWD 2010, ADOLWD 2011a and Warren 2010).

- With the concentration of major fishing ports in the Aleutian and Pribilof Islands region, seafood processing accounted for 58 percent of all private sector payments to labor in the Aleutian West Census Area in 2009 (ADOLWD 2011b).

- The seafood processing industry is estimated to have accounted for 35 percent of private-sector payments to labor in Kodiak in 2009 (ADOLWD 2011b).

- The Western Alaska Community Development Quota (CDQ) program, which allocates a portion of the Bering Sea catch for coastal communities to invest in economic development, generates millions of dollars each year. In 2008, the CDQ entities collectively generated more than $180 million in revenue (WACDA 2008).

- The CDQ Program augments the important role of the seafood industry in Western Alaska. Sixty-five Bering Sea communities participate in the CDQ program (WACDA 2008).

- From 1992 through 2008 the CDQ Program generated over $240 million in wages, payments to fishers, and scholarships and training benefits (WACDA 2008).

- In 2008 CDQ entities provided wage and salary jobs to more than 1,600 individuals, and the combined payroll for the year exceeded $22.3 million (WACDA 2008).

- The value of the six CDQ groups' assets increased from about $13.3 million in 1992 to over $559 million in 2009 (WACDA 2008).

adn.com
Anchorage Daily News

A standout year for local seafood

LAINE WELCH - FISHERIES REPORT *(01/01/11)*

KODIAK -- Alaska's seafood industry worked hard in 2010 to ramp up its message to policy makers, especially those from the Railbelt region who tend to overlook the industry's economic significance.

How important is the seafood industry to Alaska and the nation? At a glance:

• 62 percent of all U.S. seafood landings come from Alaska.

• 96 percent of all wild-caught salmon comes from Alaska.

• Seafood is by far Alaska's No. 1 export, valued at nearly $2 billion (next in line: zinc and lead at $785 million).

• Alaska ranks ninth in the world in terms of global seafood production.

The seafood industry is second only to Big Oil in revenues it generates to the state government's general fund each year. The industry provides more Alaska jobs than oil and gas, mining, tourism and timber combined.

Here are some fishing notables from 2010, in no particular order:

The University of Alaska created a center devoted entirely to ocean acidification studies. Meanwhile, acid levels in the Gulf of Alaska and the Chukchi and Bering seas continued to increase faster and more severely than previously thought.

Catch-share programs became the preferred tool for managing U.S. fisheries. Federal managers budgeted $54 million as "incentive" for catch shares to catch on in fishing regions.

The North Pacific Fishery Management Council approved sweeping changes to its fishery-observer program that will include all vessels longer than 40 feet.

Alaska's biggest fishery rebounded to accommodate a 2011 pollock catch of nearly 3 billion pounds, a 54 percent increase over the past two years -- but in line with the average catch for the past 30 years.

Kodiak and Sitka were the latest fishing towns to add some local catch to their school lunch menus, following Dillingham, Kenai, Fairbanks and Mat-Su.

Halibut prices seldom dipped below $5 a pound, boosting the value of the fishery to $193 million, an increase of $61 million over 2009.

Halibut catches continued a downward trend, and managers plan to trim the harvest again in 2011. Halibut catches in Southeast Alaska have dropped by more than 60 percent over the past five years.

Alaska salmon fishermen were paid an average of 66 cents a pound this year, a 16 percent increase over 2009.

The 2010 catch of 169 million salmon was the 11th largest on record. The dockside value of almost $534 million was an increase of nearly 30 percent and the best showing in 18 years.

Two areas, Bristol Bay and Prince William Sound, accounted for 55 percent of the value of the total Alaska commercial salmon catch.

Prince William Sound set a record with a total catch of 75.4 million -- nearly 45 percent of all salmon harvested in Alaska this year. The PWS harvest of 69 million humpies accounted for 66 percent of Alaska's total pink salmon catch.

Norton Sound fishermen saw some of the best chum salmon runs in 25 years. At Kotzebue, the chum catches tracked the best in 15 years. Upper Cook Inlet fishermen hauled in a huge 2.7 million sockeye harvest, almost a million more fish than expected. King salmon continued to decline on the Yukon River.

A surprise pink salmon fishery at Bristol Bay (Nushagak) attracted 60 boats and 35 setnetters who pulled in more than 1 million humpies plus 60,000 cohos. It's been so long since a pink and coho salmon fishery occurred, managers had no numbers to compare the catches to.

Peter Pan Seafoods and Bristol Bay fishermen were recognized by Alaska Head Start Association for providing local salmon to children and elders throughout Southwest Alaska.

After a decade of debate, the U.S. Food and Drug Administration proposed regulations to allow genetically modified animals for human consumption. First up: a salmon that grows up to 30 times faster than normal. Alaska senators said they will try to stop the fish from ever getting to market.

It turns out that the deadliest catch is the safest catch. A federal report showed that salmon fishing is Alaska's most dangerous fishery, with 39 fatalities over the past decade. That compares with a death toll of 12 Bering Sea crabbers during the same time.

For the 21st year in a row, Dutch Harbor ranked as the nation's No. 1 port for seafood landings. Kodiak ranked No. 4, up from the No. 5 spot. Eleven Alaska fishing towns made the list of top 50 U.S. ports.

Americans ate slightly less seafood --15.8 pounds per person, the lowest level since 2002. Beef is still what's for dinner: 108 pounds per capita, followed by 73 pounds of poultry.

Alaska king crab fetched some of the highest prices ever. Bering Sea crabbers got an advance of $6.25 a pound, compared with $4.76 last year.

Higher fish prices drove up both the demand and value for fishing permits and IFQs/catch shares in most regions of the state.

Laine Welch is a Kodiak-based fisheries journalist. Her Fish Radio programs can be heard on stations around the state. Her information column appears every other Sunday. *This material is protected by copyright. For information on reprinting or placing on your website or newsletter, contact msfish@alaska.com.*

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enlarge



Ray Hilborn

Without fishing, food will come from someplace else and at higher environmental costs, according to Ray Hilborn. This slide from his October lecture, for example, contrasts the species abundance and diversity of the forest at the edge of the field to farmland that has been cleared of plants and plowed.

Nov. 4, 2010

Eat a fish, save a rainforest: Professor says to weigh alternatives before we curtail fishing

By Sandra Hines
News and Information

enlarge

Alarming news reports and journal articles in recent years about fisheries facing ruin the world over has led to calls to curtail, or more drastically, to completely cease harvesting fish from coastal and ocean waters.

But replacing fish harvested from the sea with equivalent amounts of animal protein from pigs, cattle and chickens could take land resources equivalent to 22 times the rainforest we currently have, according to calculations by Ray Hilborn, UW professor of aquatic and fishery sciences. If we just stop trawl fishing -- often pointed to as the worst-of-the-worst ways to fish because nets drag along the bottom -- it would still take five times more rainforest than we have, he estimates.

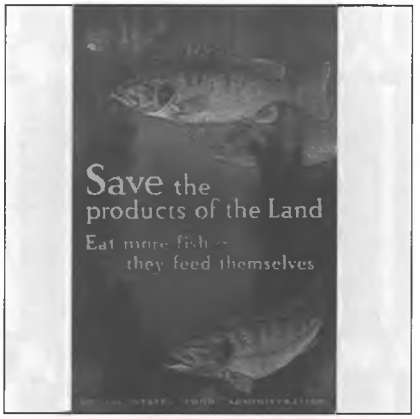
Hence the title *Eat a Fish, Save a Rainforest* for the lecture Hilborn delivered Oct. 26 as part of the series "Food: Eating Your Environment, organized by the UW Program on the Environment.

Hilborn says there are a limited number of fisheries such as Atlantic bluefin tuna where we know there are big problems and stocks are facing too much fishing pressure.

"Let's concentrate on these problems and not condemn the whole of fishing," he said. "Fish captured from marine waters make up a quarter to one-third of the animal protein consumed by humans globally -- and in places is the only animal protein available. Replacing that food will come from some place and at much higher environmental costs."

And before you vegetarians stop reading, Hilborn said to consider that areas fished for long-term sustainable yields may deplete fish abundance in an area by 70 percent and lower biodiversity by 30 percent but that should be considered in light of changes in species abundance and biodiversity when trees and other plants are removed and land plowed.

"What do you think," he said showing a slide of freshly cleared and tilled land, "If that was previously a rainforest, is biodiversity lowered by only 30 percent?"



Ray Hilborn

A poster from WWI was a concluding slide in Ray Hilborn's lecture *Eat a Fish, Save a Rainforest.*

Key to Hilborn' s argument that humans should keep fishing is that fish abundance in the world has overall been stable since the 1990s, most large fisheries are now sustainably managed and steps to curb overfishing appear to be succeeding in eight of 10 large marine ecosystems examined recently by an international group of fisheries experts. This bolsters the case that sound management can contribute to rebuilding of fisheries elsewhere, according to the group when they reported their findings in *Science* in 2009.

The group was led by Hilborn and former adversary Boris Worm of Dalhousie University, Nova Scotia. Back in 2006 Hilborn said it was mind-boggling stupid for Worm and his colleagues to say in Science that they'd detected a widespread global trend toward fisheries collapse that would lead to all fish harvested commercially being gone by 2048. The resulting news coverage frightened many people about the state of world fisheries.

The difference between the 2006 and 2009 Science papers is that the first relied on catch records, for lack of a better alternative, and the latter relied on actual estimates of abundance, as well as catch.

In his lecture, Hilborn's notion of eat a fish, save a rainforest is based on a tally he's trying to develop for fish, cattle, pigs and chickens. That tally

- Considers the resources used before one or the other ends up on the dinner table. Included could be such things as the fresh water needed and petroleum used in fertilizer to raise feed or grow pasture lands. On the fishing side would be such things as the petroleum needed to fuel vessels.
- Adds up the degradation such as manure in waterways and soil erosion from raising farm animals vs. garbage dumped at sea and oil or chemical spills from fishing.
- Totals the greenhouse gas emissions that result from both activities.

His numbers are preliminary because he said he's just begun trying to get the data but a few examples of the annual costs of livestock range from the 487 million tons of soil eroded away by worldwide pork production to 12 million tons of fertilizer required for raising cattle to 5,000 tons of antibiotics to raise chickens.

These comparisons are needed so when people talk about greatly curtailing seafood harvesting they can consider that in light of what it might mean for land resources, Hilborn said.

Hilborn's was the fourth of eight lectures in the "Food: Eating Your Environment" series where national and international experts are discussing food in its global setting including security, politics, science and society.

The lectures are free and open to the public, however, the response when seat reservations opened last summer was so strong that organizers scrambled to find larger venues and the only way to get a seat now is to show up near the start time when any open seats are up for grabs.

"Food is the ultimate environmental issue," said Julia Parrish, professor of aquatic and fishery sciences and director of the Program on the Environment. "What we eat and where it comes from shape the world's ecosystems more than any other human action. Seattle Defines the intersection of foodies and environmentalism, so it's not surprising the response to the series is so positive."

The series continues Tuesdays, from 6:30 to 8 p.m., through Nov. 30. It was organized by the Program on the Environment that has two academic offerings for UW students in conjunction with the series. Half the lectures are also part of the Jessie

and John Danz and the Walker-Ames endowed lecture series. The food series is supported by the UW Alumni Association, College of the Environment and more than a dozen other groups on and off campus.

Log in to UW News+Community to add a comment.

MARINE CONSERVATION ALLIANCE

SEA FACTS

THE SEAFOOD INDUSTRY IN ALASKA'S ECONOMY

As a major player in global markets, Alaska's seafood industry is an economic engine for both the state and the nation. This publication updates "The Seafood Industry in Alaska's Economy", first published in 2009. It shows that the seafood industry continues to be the largest private sector employer in the state.

2011 Executive Summary Update

- Alaska led all states in terms of both volume and ex-vessel value of commercial fisheries landings in 2009, with a total of 1.84 million metric tons (MT) worth 1.3 billion dollars (NMFS 2010a).

- National harvest volume in 2009 was 3,568,599 MT (NMFS 2010a).

- In the list of top 50 U.S. ports based on volume for - 2009, Alaska had 11 including Dutch Harbor-Unalaska (1st); Kodiak (4th); Naknek-King Salmon (11th); Sitka (14th); Ketchikan (15th); Petersburg (18th); Cordova (21st); Seward (26th); Homer (36); Juneau (41st); Kenai (50th) (NMFS 2010a).

- In the list of top 50 U.S. ports based on ex-vessel value for 2009, Alaska had 10; 8 of them were in the top 20. These ports include Dutch Harbor-Unalaska (2nd); Kodiak (3rd); Naknek-King Salmon (4th); Sitka (5th); Homer (12th); Seward (17th); Ketchikan (18th); Cordova (19th) (NMFS 2010a). Three other Alaska ports, Akutan, King Cove and Sand Point, would also make the top 20 were it not for confidentiality requirements that prevent release of data for ports with fewer than three processors.



Photo courtesy of ASMI

- In 2009, Dutch Harbor-Unalaska was the leading U.S. port in quantity of commercial fishery landings, and the second U.S. port in value of commercial fishery landings (NMFS 2010a)

- Dutch Harbor-Unalaska ranked second (after New Bedford, MA) with a harvest value of $159.7 million dollars; Kodiak was ranked third at $103.8 million, and Naknek-King Salmon ranked fourth at $76.1 million dollars (NMFS 2010a).

- The seafood industry, through direct, indirect and induced effects, contributed a total of $4.6 billion to Alaska's economic output in 2009.

Prepared by Northern Economics

Importance of Alaska to the Global Seafood Market

- If Alaska were a nation it would have placed 14th among seafood producing countries in 2008 (NMFS 2010b and FAO 2010).

- Alaska landings of global groundfish species groups (including cod, pollock, hake and haddock) and flatfish accounted for 18 percent of the world harvest of these species groups in 2008 (Hiatt, et al. 2010 and FAO 2010).

- In 2008 about 35 percent of the world capture production of species in the "salmon, trout, smelt" group occurred in Alaskan waters (Hiatt, et al. 2010 and FAO 2010).

- Alaska accounted for 95 percent of total U.S. pacific salmon landings in 2009 (NMFS 2010a).

- The 2010 salmon season was one of the best on record with almost 170 million fish harvested in Alaska, the 11th highest number since statehood. Preliminary 2010 estimates show that the salmon harvest generated $533.9 million, the highest ex-vessel value in eighteen years (since 1992) (ADF&G 2010).

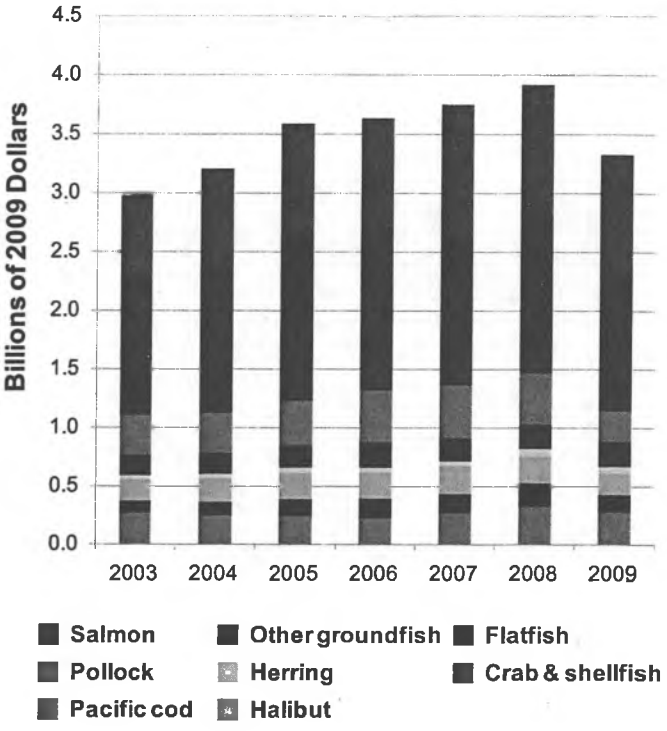
- In 2009, $1.6 billion dollars worth of seafood was exported directly from Alaska to destinations such as Japan, China, South Korea, Canada, and Europe (Office of the Governor of the State of Alaska 2009, NOAA 2010a).

- In 2009 Japan was the leading direct importer of Alaska fish and fisheries products (by value) followed by China, South Korea, Germany, the Netherlands and Canada (NOAA 2010a).



Photo Courtesy of PSPA

Real Wholesale Value by Species, 2003-2009



Source: Hiatt, 2007 and Hiatt, 2010b

Importance of Alaska Seafood to the U.S.

- In 2009, Alaska accounted for over 52 percent of the volume of the commercial seafood harvested in the United States (NMFS 2010a).

- Alaska as a single state led all other multi-state regions in the U.S. in terms of ex-vessel value with over 34 percent of the U.S. total (NMFS 2010a).

- The five New England States combined for a distant second with 20 percent, followed by the five states on the Gulf of Mexico with 16 percent (NMFS 2010a).

- Alaska's pollock fishery is the largest in the U.S., accounting for 24 percent of total U.S. fisheries landings (NMFS 2010a).

- In 2009, 26 percent of total U.S. crab catches were king and snow (tanner) crab, and they accounted for 35 percent of total U.S. crab value (NMFS 2010a). King and snow crab come entirely from Alaska.

- Dutch Harbor-Unalaska holds the record for catch volume with 911.3 million pounds landed in 2006 (NMFS 2010a).

- Alaska landings of Pacific Sea Herring accounted for 98 percent of the Pacific coast with 87 million pounds valued at over $29.3 million (NMFS 2010a).

Importance of Alaska Seafood to Alaska

- In 2009 total estimated ex-vessel value of Alaska's commercial harvest was $1.3 billion (NMFS 2010a).

- The additional value added by Alaska's seafood processing sector brought the first wholesale value of Alaska's commercial seafood industry to over $3.3 billion in 2009 (Hiatt et al. 2010).

- It is estimated that the seafood industry's $3.3 billion in wholesale value generated an additional $1.3 billion in indirect and induced economic output for a total contribution of $4.6 billion to Alaska's economic output (NEI using Hiatt 2010b, NOAA 2010b, Mothership Fleet Cooperative 2010 and IMPLAN 2009 data).

- The seafood industry also generated more than 80,800 direct, indirect, and induced jobs and $1.45 billion in direct, indirect and induced payments to labor and income (NEI using Hiatt 2010b, NOAA 2010b, Mothership Fleet Cooperative 2010 and IMPLAN 2009 data).

- In 2009 the wholesale value generated by the seafood industry represented over 10 percent of the $34 billion basic sector activity in Alaska's economy (Hiatt 2010b, Office of the Governor of the State of Alaska 2009, U.S. Census Bureau 2010 & 2011, ADOR 2011, McDowell 2010, and Szumigala 2010). The basic sector, because it brings money into the state from outside, is the driving force behind all economic activity in the state.

- The seafood industry ranks third in importance behind the North Slope oil and gas industry and federal government in terms of generating basic economic activity in Alaska (NEI using ADOLWD 2010 and ADOLWD 2011a).

- Alaska's seafood industry generated about $79 million in state taxes and fees, in addition to local fish taxes in fiscal year 2009 (ADOR 2009; ADCCED 2011).

- Seafood was Alaska's leading export in 2009 and accounted for 50 percent of total direct exports—nearly double the value of the second highest export sector (minerals at 26 percent), (U.S. Census Bureau 2010). Total Alaskan seafood exports were even greater; a large portion of Alaskan seafood is exported internationally from packaging and storage facilities in Washington.

- In 2009, seafood processing accounted for about 95 percent of all food manufacturing jobs in Alaska, and 71 percent of total manufacturing jobs (ADOLWD 2010 and ADOLWD 2011b).



Photo courtesy of Ron Clarke

- With an estimated harvesting and processing workforce of 70,548, the seafood industry employs more workers than any other non-government industry sector in Alaska, including oil and gas and mining combined. The trade, transportation and utilities sector follows with a workforce of 63,300 (ADOLWD 2010, ADOLWD 2011a and Warren 2010).

- With the concentration of major fishing ports in the Aleutian and Pribilof Islands region, seafood processing accounted for 58 percent of all private sector payments to labor in the Aleutian West Census Area in 2009 (ADOLWD 2011b).

- The seafood processing industry is estimated to have accounted for 35 percent of private-sector payments to labor in Kodiak in 2009 (ADOLWD 2011b).

- The Western Alaska Community Development Quota (CDQ) program, which allocates a portion of the Bering Sea catch for coastal communities to invest in economic development, generates millions of dollars each year. In 2008, the CDQ entities collectively generated more than $180 million in revenue (WACDA 2008).

- The CDQ Program augments the important role of the seafood industry in Western Alaska. Sixty-five Bering Sea communities participate in the CDQ program (WACDA 2008).

- From 1992 through 2008 the CDQ Program generated over $240 million in wages, payments to fishers, and scholarships and training benefits (WACDA 2008).

- In 2008 CDQ entities provided wage and salary jobs to more than 1,600 individuals, and the combined payroll for the year exceeded $22.3 million (WACDA 2008).

- The value of the six CDQ groups' assets increased from about $13.3 million in 1992 to over $559 million in 2009 (WACDA 2008).

Table 1. Seafood Industry Employment by Region, 2009

Summary of Workers	Harvesting	Processing	Total
Aleutian and Pribilof Islands	5,309	6,276	11,585
Bristol Bay	9,385	4,522	13,907
Kodiak	3,664	2,934	6,598
Northern	627	68	695
Southcentral	8,071	3,491	11,562
Southeast	10,150	4,886	15,036
Yukon Delta	2,986	831	3,817
At-Sea	1,732	5,616	7,348
Total	**41,924**	**28,624**	**70,548**

Source: Northern Economics, Inc. and ADOLWD, 2010.

Table 2. Estimated Seafood Ex-vessel Volume and Value by Region, 2009

Region	Harvest Weight (1,000 MT)	Ex-Vessel Value ($ Millions)
Aleutian and Pribilof Islands	497.2	393.7
Bristol Bay	86.6	119.0
Kodiak	157.2	129.8
Northwest/Arctic/Yukon-Kuskokwim	3.9	6.7
Southcentral	77.8	177.0
Southeast	134.4	209.8
At-Sea	883.0	307.9
Total	**1,840.0**	1,343.8

Source: Estimated by Northern Economics using NMFS (2010a), Hiatt (2010a) and Hiatt (2010b).

Table 3. Estimated Seafood Wholesale Volume and Value by Region, 2009

Region	Product Weight (1,000 MT)	Wholesale Value ($ Millions)
Aleutian and Pribilof Islands	180.9	735.8
Bristol Bay	48.6	250.2
Kodiak	72.9	261.1
Northwest/Arctic/Yukon-Kuskokwim	2.3	15.9
Southcentral	45.4	289.3
Southeast	81.1	374.2
At-Sea	457.0	1,396.3
Total	**888.1**	**3,322.9**

Source: Hiatt, 2010b

2011 report sponsored by the Marine Conservation Alliance

This is a 2011 update of the Executive Summary from the 2009 report "The Seafood Industry in Alaska's Economy". This report, as well as the 2011 update with full references is available at www.marineconservationalliance.org.

Also follow **'SeaAlliance'** on:

431 N. Franklin St. Ste 305 Juneau, AK 99801 | phone 907. 523.0731 | www.marineconservationalliance.org

2/24/11 Overview: Alaska Commercial Fishing Harvest Sector

<TARGET><BILL></BILL><SUBJECT>2-24-11 Overview Alaska Commercial Fishing Harvest Sector</SUBJECT><COMM>HFSH27</COMM></TARGET>

UNITED FISHERMEN OF ALASKA

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www.ufa-fish.org

UFA Mission

To promote and protect the common interest of Alaska's commercial fishing industry, as a vital component of Alaska's social and economic well-being.

UFA Policy Statements

- ✓ Promote positive relations between industry sectors.
- ✓ Support all commercial gear types and remain neutral on allocative issues between commercial gear groups.
- ✓ Protect industry from attacks through initiatives, legislation, etc.
- ✓ Promote industry safety.
- ✓ Promote healthy fishery resources by supporting research and habitat protection.
- ✓ Support adequate funding for fishery research, management and enforcement.
- ✓ Oppose fish farming.
- ✓ Support development of new fisheries.
- ✓ Educate industry, government and the public.
- ✓ Support efforts to increase consumption of Alaska seafood.
- ✓ Promote quality standards – harvester to consumer.
- ✓ Protect consumer access to seafood by maintaining a stable supply of product to processors.

UFA policy for healthy and sustainable management of fisheries

UFA strongly supports:

- ✓ Escapement goal mgmt (Biological Escapement Goal).
- ✓ Local management that is adaptive and abundance based.
- ✓ Use of Commissioner's EO authority on an active basis for the local management of a fishery.
- ✓ Mixed stock management.

Core Functions of UFA – in order of priority

1. Legislative presence
2. Provide a forum for communication within the fishing industry
3. Maintain a statewide trade organization with staffed office
4. Public relations and educational programs targeting:
    a. members
    b. seafood industry and other industries
    c. general public

MEMBER ORGANIZATIONS

Alaska Bering Sea Crabbers • Alaska Crab Coalition • Alaska Independent Fishermen's Marketing Association
Alaska Independent Tendermen's Association • Alaska Longline Fishermen's Association • Alaska Scallop Association • Alaska Troilers Association
Alaska Whitefish Trawlers Association • Aleutian Pribilof Islands Community Development Association • Armstrong Keta • At-sea Processors Association
Bristol Bay Reserve • Bristol Bay Regional Seafood Development Association • Cape Barnabas Inc. • Concerned Area "M" Fishermen
Cook Inlet Aquaculture Association • Cordova District Fishermen United • Crab Group of Independent Harvesters • Douglas Island Pink and Chum
Fishing Vessel Owners Association • Groundfish Forum • Kenai Peninsula Fishermen's Association • Kodiak Regional Aquaculture Association
North Pacific Fisheries Association • Northern Southeast Regional Aquaculture Association • Petersburg Vessel Owners Association
Prince William Sound Aquaculture Corporation • Purse Seine Vessel Owner Association • Seafood Producers Cooperative
Southeast Alaska Herring Conservation Alliance • Southeast Alaska Fisherman's Alliance • Southeast Alaska Regional Dive Fisheries Association
Southeast Alaska Seiners • Southern Southeast Regional Aquaculture Association • United Catcher Boats • United Cook Inlet Drift Association
United Southeast Alaska Gillnetters • Valdez Fisheries Development Association

UNITED FISHERMEN OF ALASKA

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United Fishermen of Alaska – Alaska Fishing Industry Background

UFA Mission: To promote and protect the common interests of Alaska's commercial fishing industry as a vital component of Alaska's social and economic well-being.

UFA represents 38 regional and gear specific fishing organizations from all major fisheries throughout the state, including eight non-profit aquaculture associations and over 400 independent fishermen and crew members. UFA also represents over 40 business members in seafood processing, communications, retail and other business sectors that rely on Alaska's commercial fishing industry.

UFA includes representative organizations from salmon, halibut, pollock, flatfish, Pacific cod, rockfish, sablefish, other groundfish, and herring roe fisheries; Dungeness, opilio, and king crab harvest; and geoduck, sea urchin, and sea cucumber dive fisheries. Altogether these fisheries in Alaska waters and the federal fisheries off Alaska's shores make up a diversified and sustainable resource industry that provides more than half of U.S. seafood production and is the economic lifeblood of Alaska's coastal communities. With over 400 billion pounds harvested in and offshore from Alaska, if Alaska were a country it would rank 14th in world seafood production.

The commercial fishing and seafood processing industry contributes jobs for over 12,000 permit holders, 11,000 crew members, and 8,000 seafood processing workers. Ten Alaska ports rank among the top fifty U.S. ports in value and volume of fishery landings. Alaska's sustainable fisheries are viewed as a model for sustainable management worldwide.

The seafood industry contributes landing tax revenue to state and local municipal governments. Seafood is second only to the oil industry in contributions to Alaska's state general fund. Alaska fisheries generate over $2 billion in annual ex-vessel income, and more than $100 million in taxes and fees.

UFA promotes positive relations between Alaska fishermen and fishing groups, processing and transportation sectors of the fishing industry, and state and federal government agencies and elected officials to further our mission. Through these efforts we have worked to successfully pass over 45 fishery-related bills in the Alaska Legislature from 2002 to 2010.

Arni Thomson, President

Mark Vinsel, Executive Director

UFA MEMBER ORGANIZATIONS

Alaska Bering Sea Crabbers • Alaska Crab Coalition • Alaska Independent Fishermen's Marketing Association
Alaska Independent Tendermen's Association • Alaska Longline Fishermen's Association • Alaska Scallop Association • Alaska Trollers Association
Alaska Whitefish Trawlers Association • Aleutian Pribilof Islands Community Development Association • Armstrong Keta • At-sea Processors Association
Bristol Bay Reserve • Bristol Bay Regional Seafood Development Association • Cape Barnabas Inc. • Concerned Area "M" Fishermen
Cook Inlet Aquaculture Association • Cordova District Fishermen United • Crab Group of Independent Harvesters • Douglas Island Pink and Chum
Fishing Vessel Owners Association • Groundfish Forum • Kenai Peninsula Fishermen's Association • Kodiak Regional Aquaculture Association
North Pacific Fisheries Association • Northern Southeast Regional Aquaculture Association • Petersburg Vessel Owners Association
Prince William Sound Aquaculture Corporation • Purse Seine Vessel Owner Association • Seafood Producers Cooperative • Sitka Herring Association
Southeast Alaska Fisherman's Alliance • Southeast Alaska Regional Dive Fisheries Association • Southeast Alaska Seiners
Southern Southeast Regional Aquaculture Association • United Catcher Boats • United Cook Inlet Drift Association
United Southeast Alaska Gillnetters • Valdez Fisheries Development Association

Alaska Commercial Fishing Harvest Sector Overview

Presented to the House Special Committee on Fisheries, February 24, 2011

Arni Thomson, UFA President
Mark Vinsel, UFA Executive Director
Jerry McCune, UFA Government Relations



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UFA Member Associations Areas of Operation



Southeast Alaska

Alaska Longline Fishermen's Ass'n
Alaska Trollers Association
Armstrong Keta, Inc.
Douglas Island Pink and Chum
Northern Southeast Regional Aquaculture Asss'n
Petersburg Vessel Owners
Purse Seine Vessel Owners Ass'n (PSVOA)
Seafood Producers Cooperative
Southeast Herring Conservation Assn.
Southeast Alaska Fishermen's Alliance
Southeast Alaska Regional Dive Fisheries Assn.
Southeast Alaska Seiners Association
Southern Southeast Regional Aquaculture Assn.
United Southeast Alaska Gillnetters Assn
Alaska Independent Tenderman's Assn

UFA Member Associations Areas of Operation



Gulf of Alaska

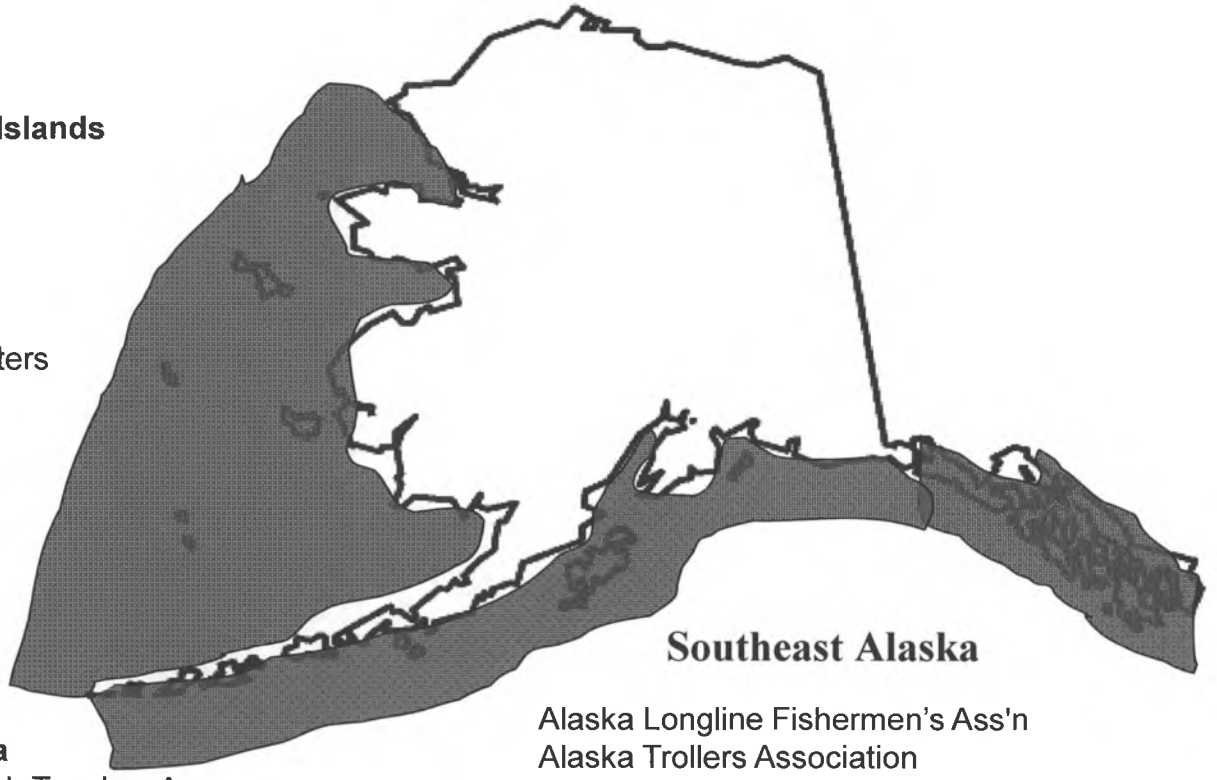
Alaska Whitefish Trawlers Assn.
Cape Barnabas, Inc.
Concerned Area "M" Fishermen
Cook Inlet Aquaculture Association
Cordova District Fishermen United
Kenai Peninsula Fishermen Ass'n
Kodiak Regional Aquaculture Ass'n
North Pacific Fisheries Association
Prince William Sound Aquaculture Corp
United Cook Inlet Drift Association
Valdez Fisheries Development Association
Western Gulf of Alaska Fishermen

Southeast Alaska

Alaska Longline Fishermen's Ass'n
Alaska Trollers Association
Armstrong Keta, Inc.
Douglas Island Pink and Chum
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Petersburg Vessel Owners
Purse Seine Vessel Owners Ass'n (PSVOA)
Seafood Producers Cooperative
Southeast Herring Conservation Assn.
Southeast Alaska Fishermen's Alliance
Southeast Alaska Regional Dive Fisheries Assn.
Southeast Alaska Seiners Association
Southern Southeast Regional Aquaculture Assn.
United Southeast Alaska Gillnetters Assn
Alaska Independent Tenderman's Assn

UFA Member Associations Areas of Operations

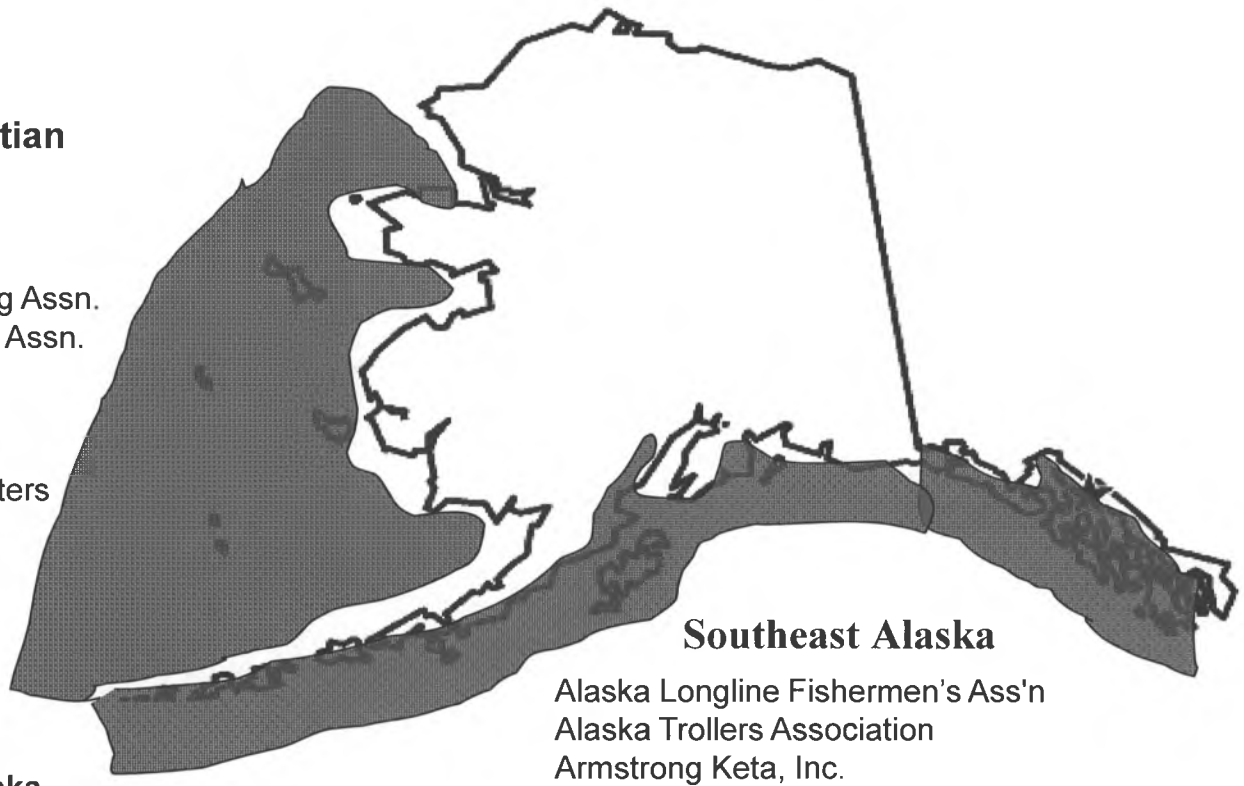
Bering Sea/ Bristol Bay/Aleutian Islands
Alaska Bering Sea Crabbers
Alaska Crab Coalition
At-Sea Processors Association
Bristol Bay Reserve
Bristol Bay RSDA
Crab Group of Independent Harvesters
Groundfish Forum
United Catcher Boats



Gulf of Alaska
Alaska Whitefish Trawlers Assn.
Cape Barnabas, Inc.
Concerned Area "M" Fishermen
Cook Inlet Aquaculture Association
Cordova District Fishermen United
Kenai Peninsula Fishermen Ass'n
Kodiak Regional Aquaculture Ass'n
North Pacific Fisheries Association
Prince William Sound Aquaculture Corp
United Cook Inlet Drift Association
Valdez Fisheries Development Association
Western Gulf of Alaska Fishermen

Alaska Longline Fishermen's Ass'n
Alaska Trollers Association
Armstrong Keta, Inc.
Douglas Island Pink and Chum
Northern Southeast Regional Aquaculture Asss'n
Petersburg Vessel Owners
Purse Seine Vessel Owners Ass'n (PSVOA)
Seafood Producers Cooperative
Southeast Herring Conservation Assn.
Southeast Alaska Fishermen's Alliance
Southeast Alaska Regional Dive Fisheries Assn.
Southeast Alaska Seiners Association
Southern Southeast Regional Aquaculture Assn.
United Southeast Alaska Gillnetters Assn
Alaska Independent Tenderman's Assn

UFA Member Associations Areas of Operations



Bering Sea/ Bristol Bay/Aleutian Islands

Alaska Bering Sea Crabbers
Alaska Crab Coalition
AK Independent Fisheries Marketing Assn.
Aleutian Pribilof Is. Community Dev Assn.
At-Sea Processors Association
Bristol Bay Reserve
Bristol Bay RSDA
Crab Group of Independent Harvesters
Groundfish Forum
United Catcher Boats

Statewide

Alaska Scallop Association
Fishing Vessel Owners Association

Gulf of Alaska

Alaska Whitefish Trawlers Assn.
Cape Barnabas, Inc.
Concerned Area "M" Fishermen
Cook Inlet Aquaculture Association
Cordova District Fishermen United
Kenai Peninsula Fishermen Ass'n
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Southeast Alaska

Alaska Longline Fishermen's Ass'n
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Southern Southeast Regional Aquaculture Assn.
United Southeast Alaska Gillnetters Assn
Alaska Independent Tenderman's Assn

UNITED FISHERMEN OF ALASKA

211 Fourth Street, Suite 110
Juneau, Alaska 99801-1172
(907) 586-2820
(907) 463-2545 Fax
E-Mail: ufa@ufa-fish.org
www.ufa-fish.org

Mission:

To promote and protect the common interests of Alaska's commercial fishing industry as a vital component of Alaska's social and economic well-being.

UFA Policy Statements

- Promote positive relations between industry sectors
- Support all commercial gear types and remain neutral on allocative issues between commercial gear groups
- Promote industry safety
- Promote healthy fishery resources by supporting research and habitat protection
- Support adequate funding for fishery research, management and enforcement
- Educate industry, government and the public
- Oppose fish farming in Alaska
- Support development of new fisheries
- Support efforts to increase consumption of Alaska seafood
- Promote quality standards – harvester to consumer
- Protect industry from attacks through initiatives, legislation, etc
- Protect consumer access to seafood by maintaining a stable supply of product to processors



UFA policy for healthy and sustainable management of salmon fisheries

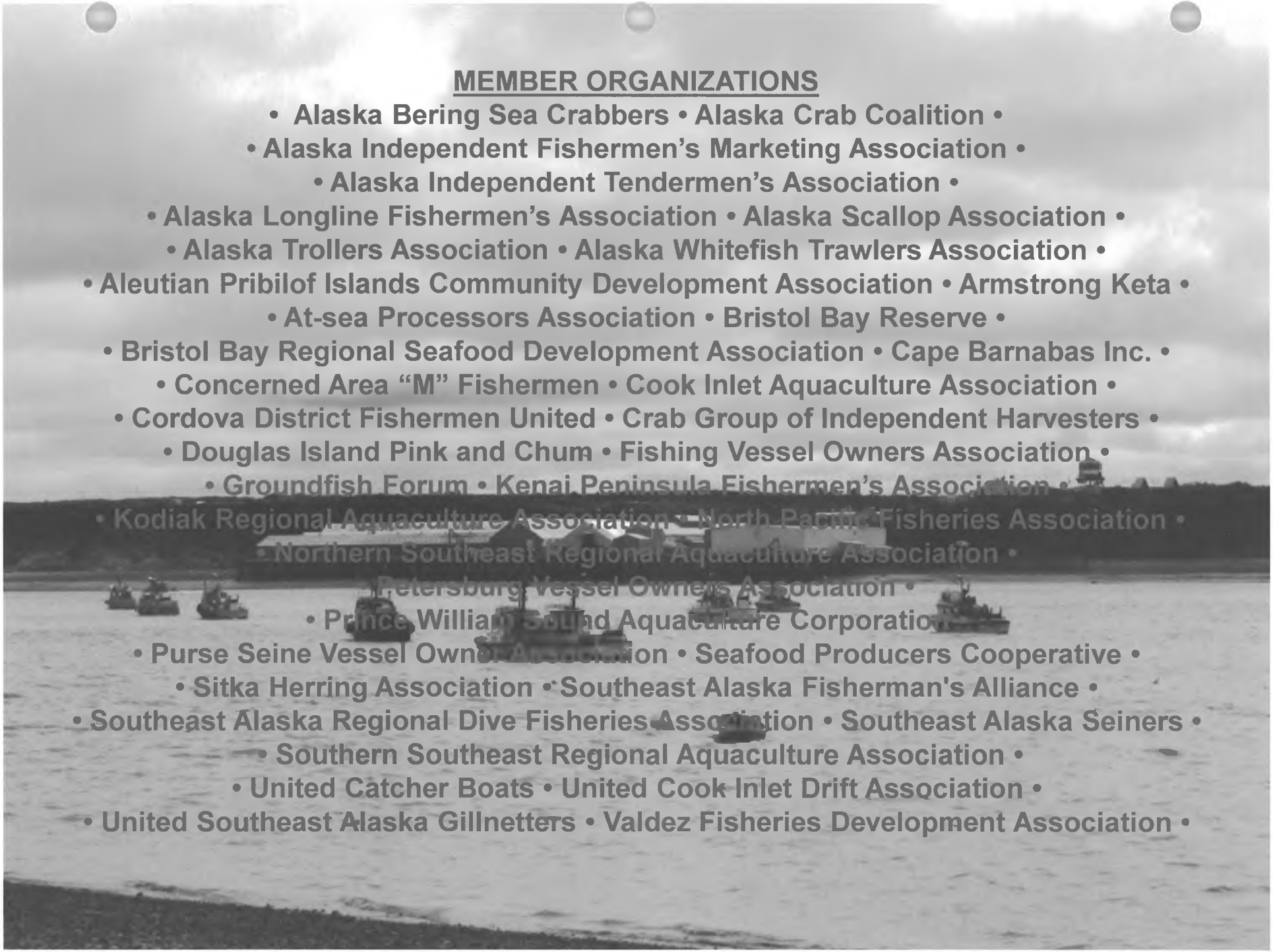


- Escapement goal management (Biological Escapement Goal).
- Local management that is adaptive and abundance based.
- Use of Commissioner's EO authority on an active basis for the local management of a fishery.
- Mixed stock management.

Core Functions of UFA – in order of priority

- Legislative presence
- Provide a forum for communication within the fishing industry.
- Maintain a statewide trade organization with staffed office.
- Public relations and educational programs targeting:
  - Members
  - seafood industry and other industries
  - general public





MEMBER ORGANIZATIONS

• Alaska Bering Sea Crabbers • Alaska Crab Coalition •
• Alaska Independent Fishermen's Marketing Association •
• Alaska Independent Tendermen's Association •
• Alaska Longline Fishermen's Association • Alaska Scallop Association •
• Alaska Trollers Association • Alaska Whitefish Trawlers Association •
• Aleutian Pribilof Islands Community Development Association • Armstrong Keta •
• At-sea Processors Association • Bristol Bay Reserve •
• Bristol Bay Regional Seafood Development Association • Cape Barnabas Inc. •
• Concerned Area "M" Fishermen • Cook Inlet Aquaculture Association •
• Cordova District Fishermen United • Crab Group of Independent Harvesters •
• Douglas Island Pink and Chum • Fishing Vessel Owners Association •
• Groundfish Forum • Kenai Peninsula Fishermen's Association •
• Kodiak Regional Aquaculture Association • North Pacific Fisheries Association •
• Northern Southeast Regional Aquaculture Association •
• Petersburg Vessel Owners Association •
• Prince William Sound Aquaculture Corporation •
• Purse Seine Vessel Owners Association • Seafood Producers Cooperative •
• Sitka Herring Association • Southeast Alaska Fisherman's Alliance •
• Southeast Alaska Regional Dive Fisheries Association • Southeast Alaska Seiners •
• Southern Southeast Regional Aquaculture Association •
• United Catcher Boats • United Cook Inlet Drift Association •
• United Southeast Alaska Gillnetters • Valdez Fisheries Development Association •

Alaska Seafood Industry Economic Impacts





Economic Engine for All Alaskans.

Alaska's Commercial Fisheries

- If Alaska were a nation, it would place 14th among seafood producing countries.
- In the list of top 50 U.S. ports based on ex-vessel value, Alaska had 13 in the top 50 US seafood ports by value; 8 of them were in the top 20.
- These ports include Dutch Harbor-Unalaska (2nd); Kodiak (3rd); Naknek-King Salmon (4th); Sitka (5th); Homer (12th); Seward (17th); Ketchikan (18th); Cordova (19th). Three other Alaska ports, Akutan, King Cove and Sand Point, would also make the top 20 were it not for confidentiality requirements

(Marine Conservation Alliance/Northern Economics Feb. 2011).

Economic Engine for All Alaskans.

Alaska's Commercial Fisheries

- The seafood industry, through direct, indirect and induced effects, contributed a total of $4.6 billion to Alaska's economic output in 2009
- In 2009, $1.6 billion dollars worth of seafood was exported directly from Alaska to destinations such as Japan, China, South Korea, Canada, and Europe
- Alaska's CDQ fishery entities generated more than $180 Million in revenue in 65 Bering Sea communities.
- CDQ entities provide jobs to 1,600 individuals, with total payroll over $22 Million.

(MCA/Northern Economics Feb. 2011).

Feeding the Public

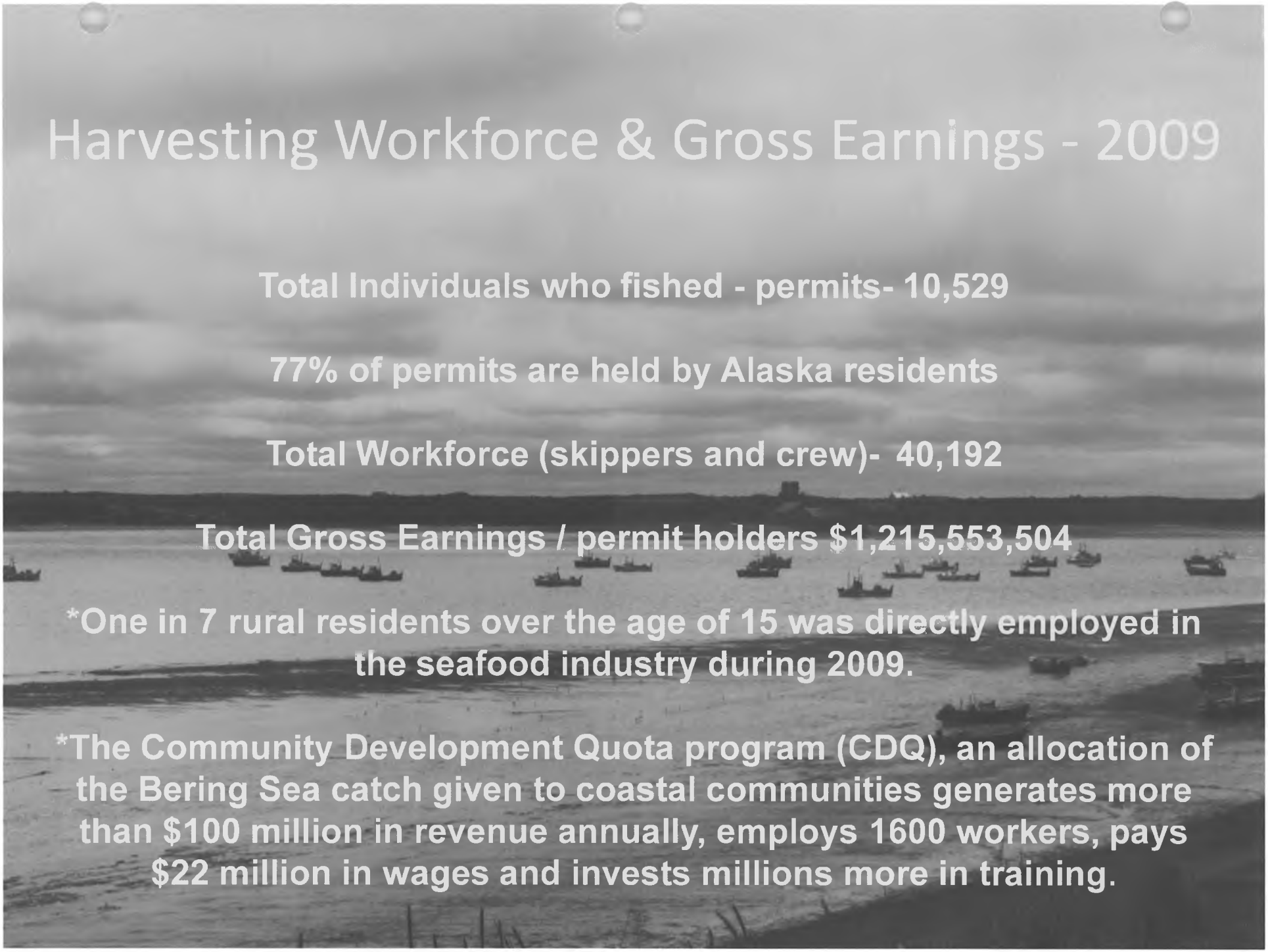
Alaska's Commercial Fisheries

- *1.84 million metric tons (over 4 billion lbs) total seafood harvest (2009).*
- *With U.S. average yearly consumption of 16 lbs per person = 255,000,000 people's seafood.*
- In 2009, Alaska accounted for over 52 percent of the volume of the commercial seafood harvested in the United States (NMFS 2010a).

Fishing/Seafood Industry is Alaska's Largest Private Sector Employer

With an estimated harvesting and processing workforce of 70,548 persons, the seafood industry employs more workers than any other non-government industry sector in Alaska, including oil and gas and mining combined. The trade, transportation and utilities sector follows with a workforce of 63,300.

Source: ADOLWD 2010, ADOLWD 2011a and Warren 2010.



Harvesting Workforce & Gross Earnings - 2009

Total Individuals who fished - permits- 10,529

77% of permits are held by Alaska residents

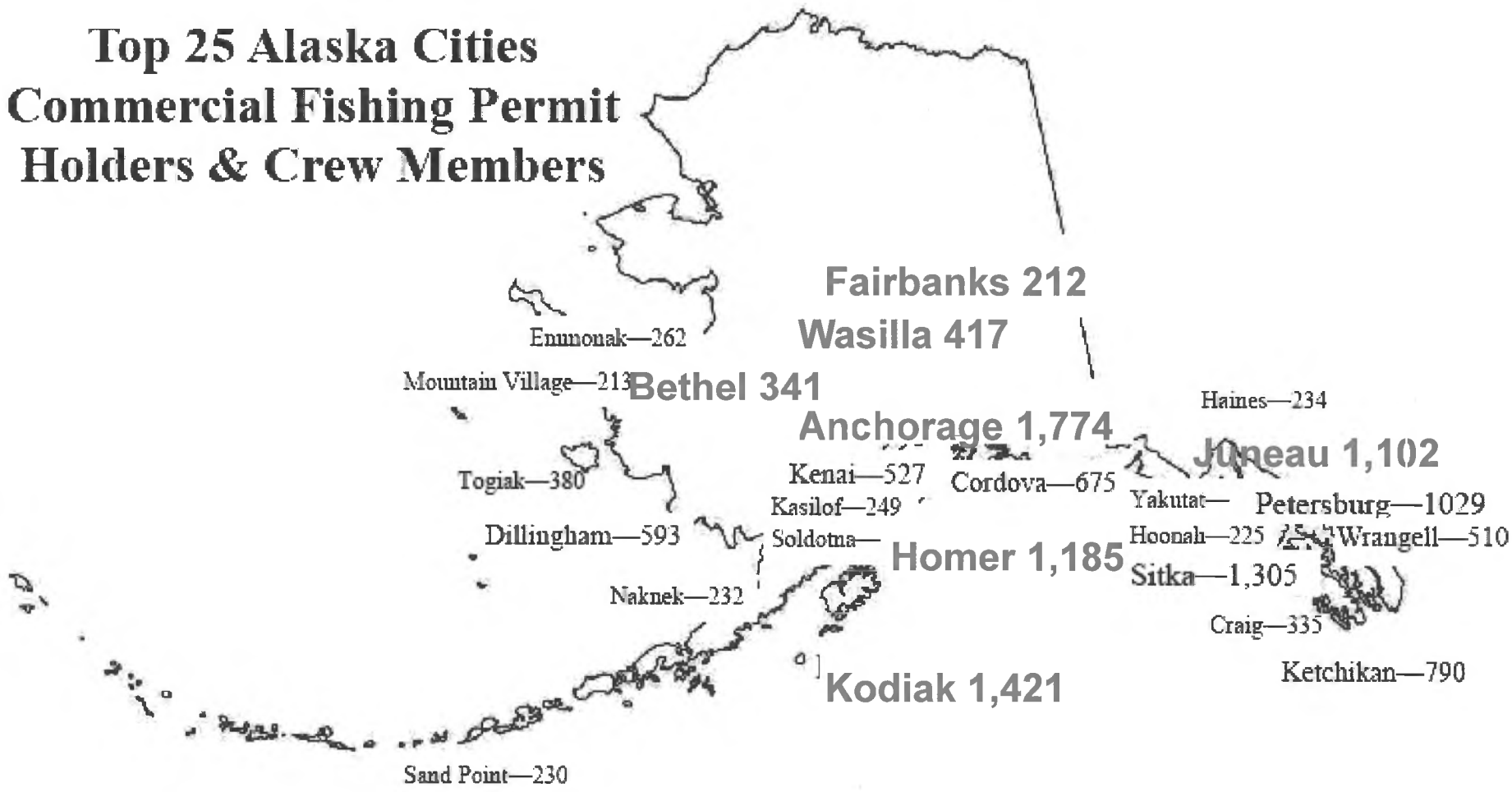
Total Workforce (skippers and crew)- 40,192

Total Gross Earnings / permit holders $1,215,553,504

***One in 7 rural residents over the age of 15 was directly employed in the seafood industry during 2009.**

***The Community Development Quota program (CDQ), an allocation of the Bering Sea catch given to coastal communities generates more than $100 million in revenue annually, employs 1600 workers, pays $22 million in wages and invests millions more in training.**

Top 25 Alaska Cities Commercial Fishing Permit Holders & Crew Members

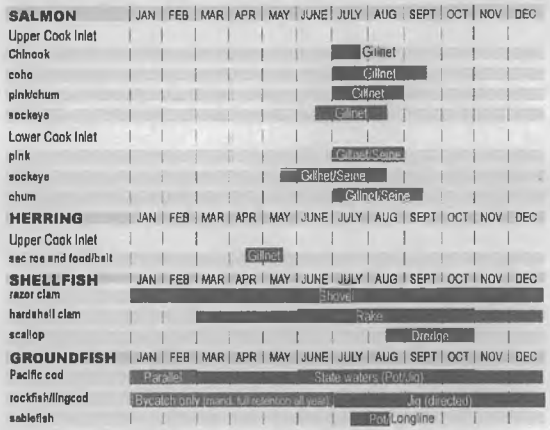


In 2007, there were over 23,000 Alaska residents commercial fishing permit holders and crew members. 48 Alaska cities have more than 100 skippers & crew.

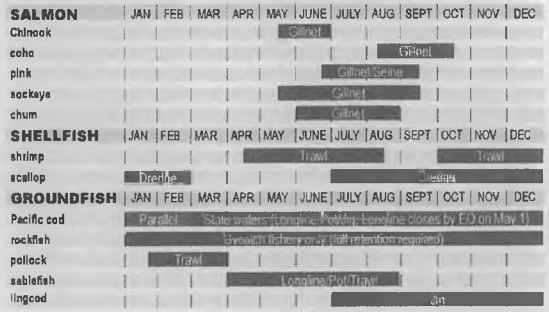
2007 data from Commercial Fisheries Entry Commission (permits), Alaska Department of Fish and game (crew—2007 is latest year for which crew data is available)

Fishing throughout the state, and the calendar

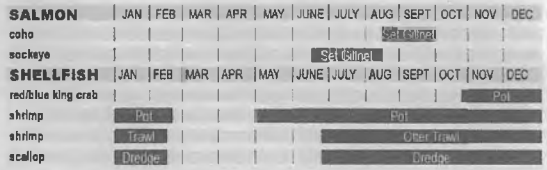
Cook Inlet



Prince William Sound/Copper River

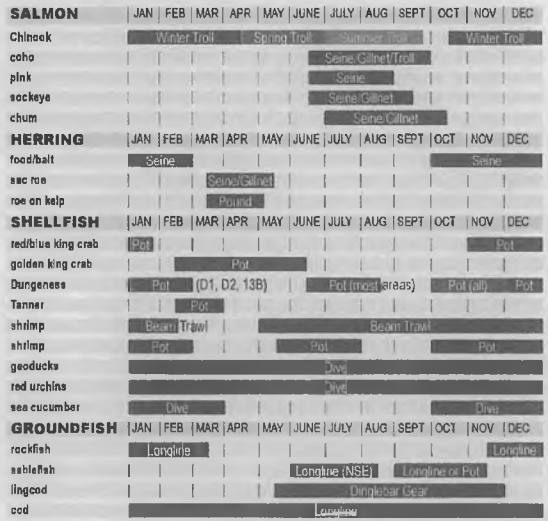


Yakutat



Tanner and Dungeness crab fisheries are closed until further notice.

Southeast Alaska



Commercial Fishing Seasons in Alaska

Alaska Department of Fish and Game
Division of Commercial Fisheries
P.O. Box 115526
Juneau, AK 99811-5526
John Hilsinger, Director
(907) 465-4210
www.cf.adfg.state.ak.us

http://www.cf.adfg.state.ak.us/geninfo/pubs/seasons/season_2.pdf

This summary is intended as a general guide only and is non-binding. For detailed regulatory information refer to official codes.

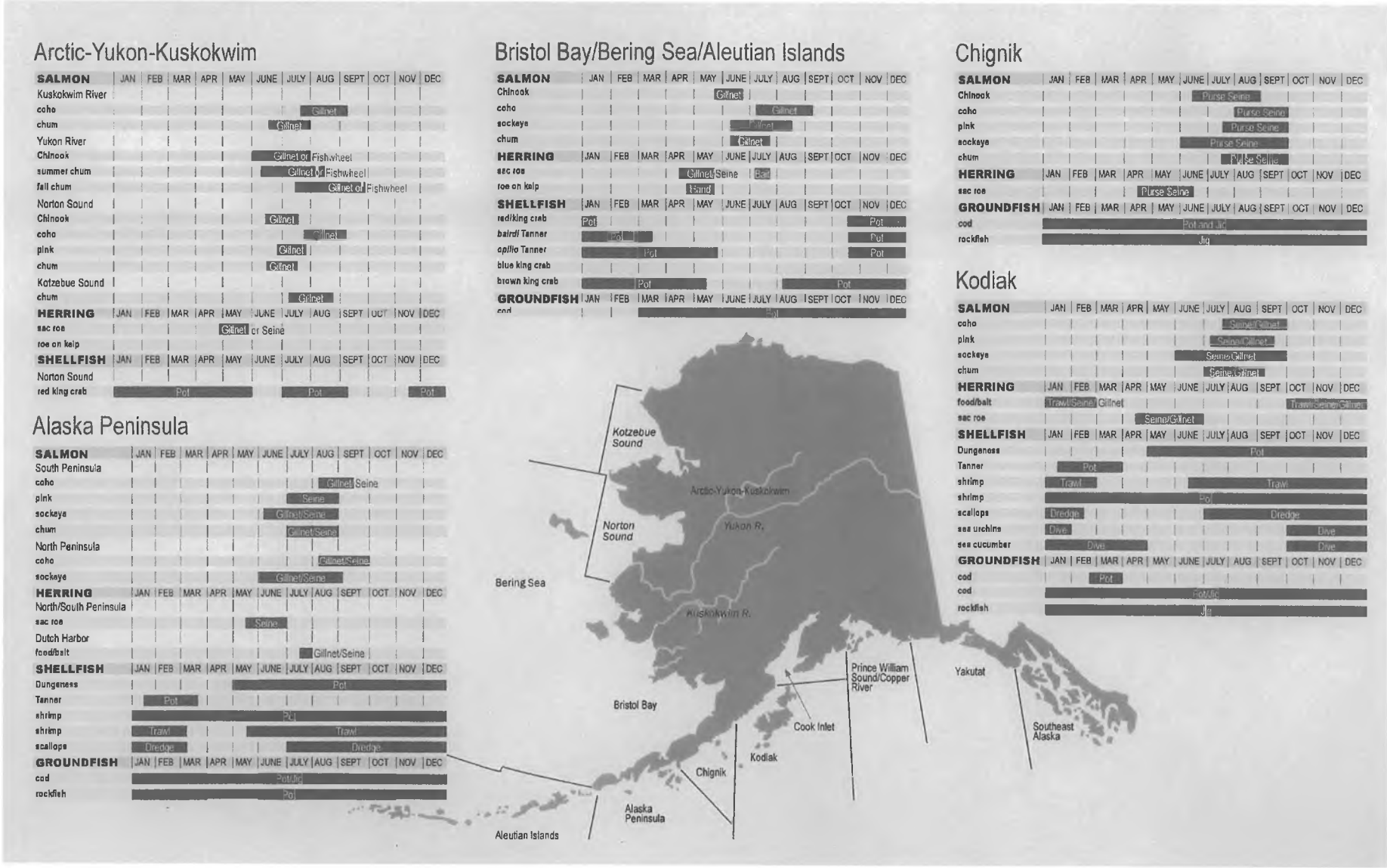
Season lengths indicated in this summary are subject to closure by emergency order as guideline harvest objectives are met or as deemed necessary by conservation concerns.



Published February 2010.

http://www.adfg.alaska.gov/index.cfm?adfg=fishingCommercial.main

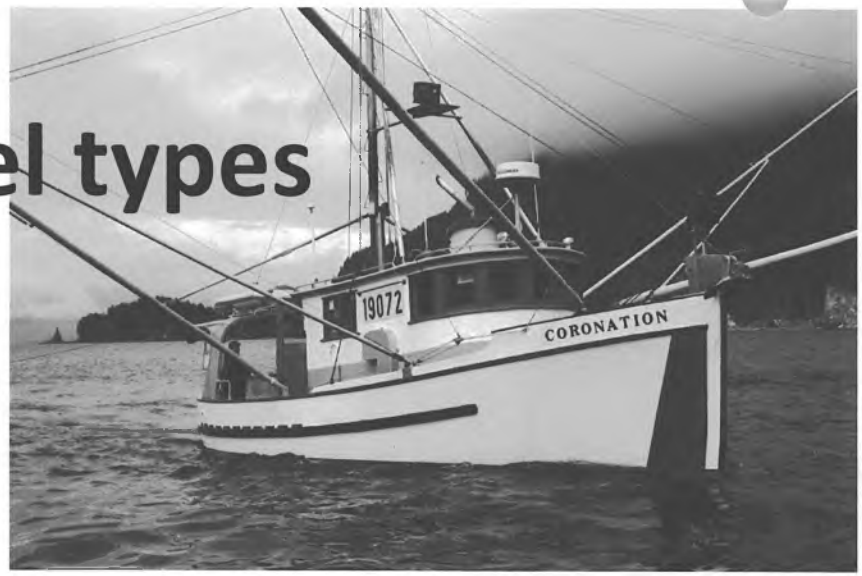
Fishing throughout the state, and the calendar



http://www.adfg.alaska.gov/static/fishing/pdfs/commercial/fishingseasons_cf.pdf

Gear and vessel types

- Purse Seine
- Gillnetter
- Troller
- Trawler
- Jig
- Crabber
- Longliner
- Set Net





Commercial Fishery Taxes

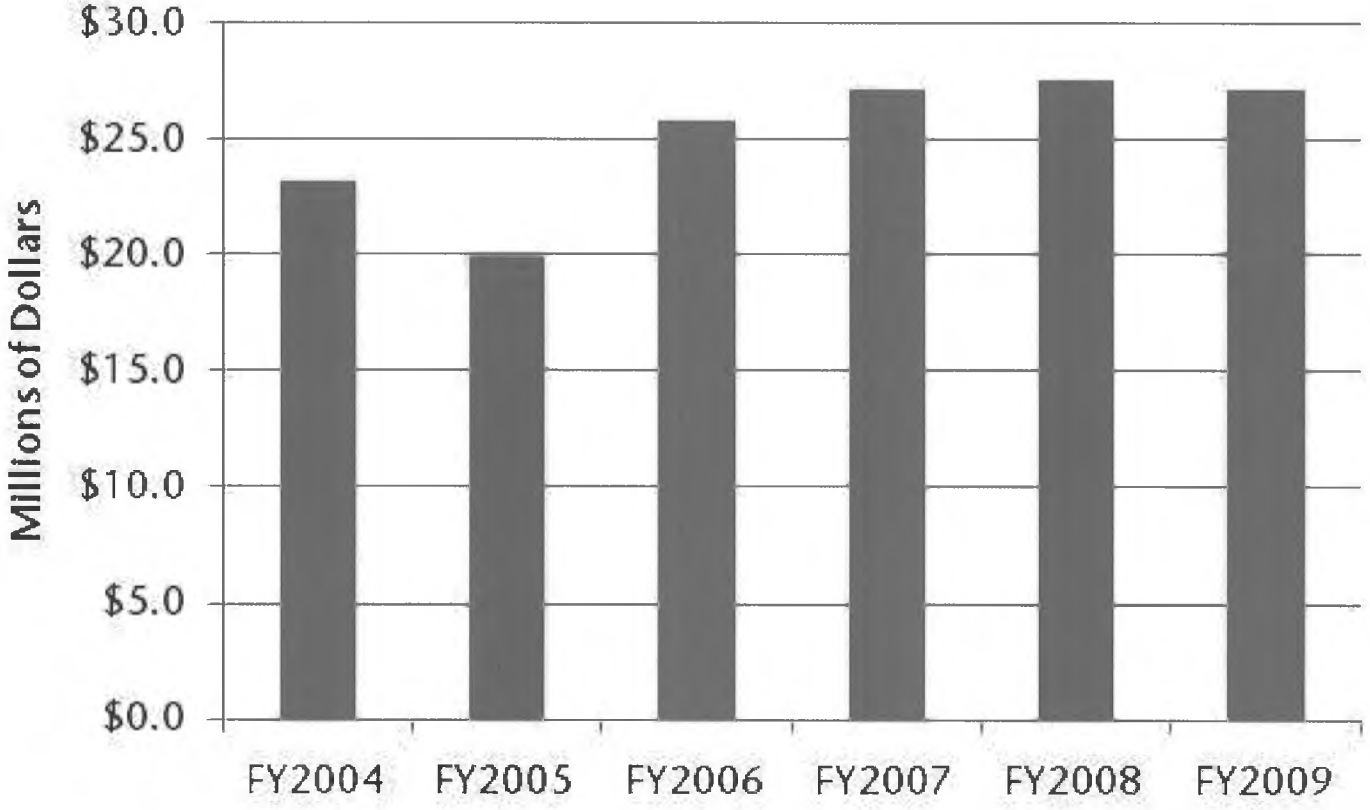
Seafood Revenue Components

Fisheries Taxes:	**FY 2010**
Fisheries Business (shared with communities)	31,945,400
Fishery Resource Landing (shared with communities	12,552,075
Seafood Marketing Assessment (.5%)	7,812,697
Salmon Enhancement	4,877,106
Seafood Development	1,578,861
Dive Fishery Management	523,024
FISHERIES SUBTOTAL	59,289,163



Source: Alaska Tax Division 2010 Annual Report

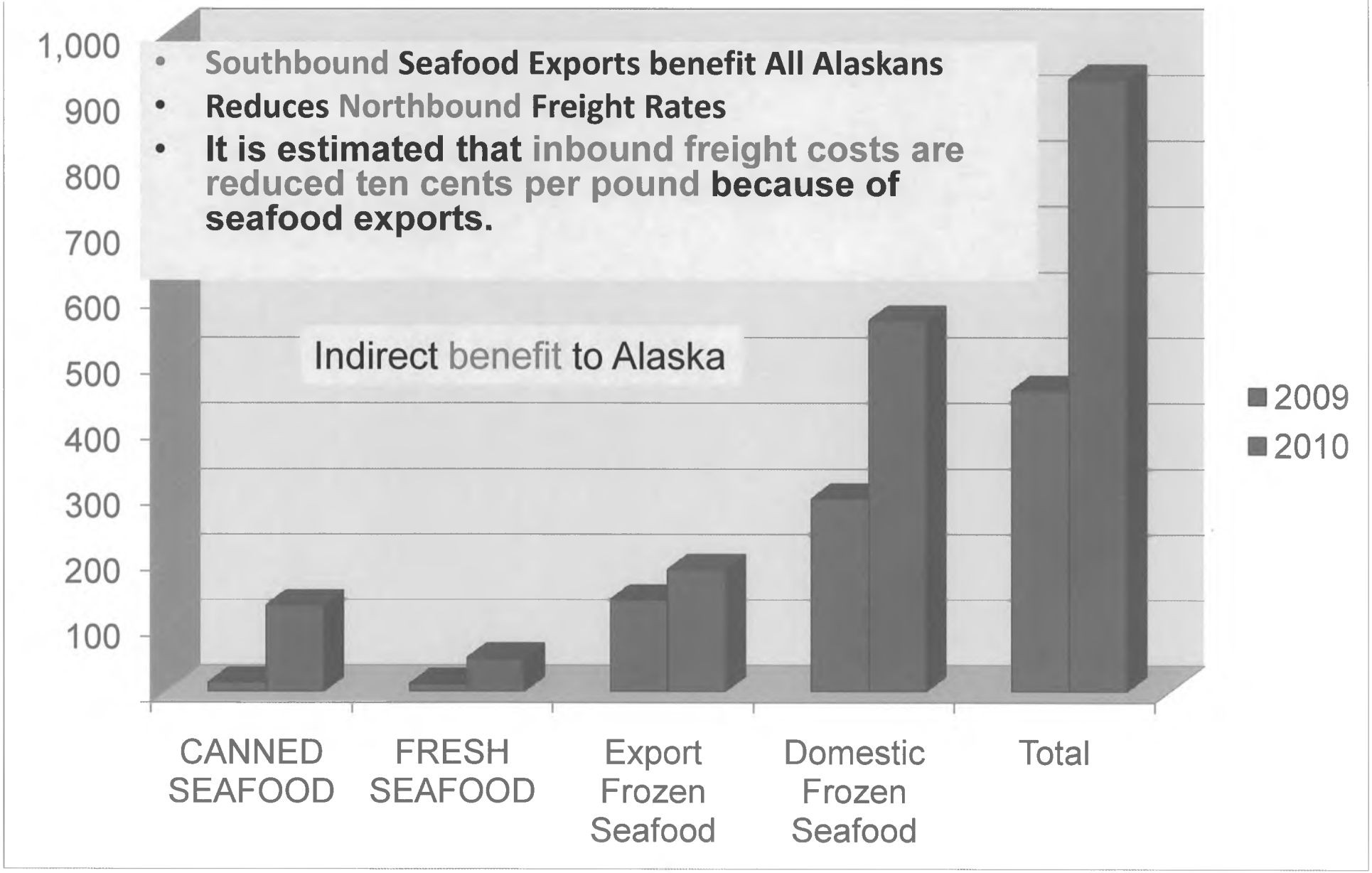
Seafood Contributions to the State General Fund (last 6 years)



Source: DOR.

Total of $ 151 million over last 6 years.

TOTE Southbound Seafood Volumes 2009 and 2010



EXCERPT FROM THE ALASKA CONSTITUTION

Article 8 – Natural Resources
Section 4. Sustained Yield

Fish, forests, wildlife, grasslands, and all other replenishable resources belonging to the State shall be utilized, developed, and maintained on the sustained yield principle, subject to preferences among beneficial uses.

Adopted by the Constitutional Convention February 5, 1956
Ratified by the people of Alaska April 24, 1956
Became operative with the formal proclamation of Alaska statehood January 3, 1959

Fisheries Management Methods in Alaska-

Enforced by the National Marine Fisheries Service and the Alaska Department of Fish & Game-

An important method is **Total Allowable Catch (TAC)** – set as a firm limit, beyond which fishing must stop

Balancing finite fish stocks with improvements in catching efficiency are regulated by:

- **Time-and-area closures**: These methods allow fishing during certain times or in certain areas, but not in others
- **Restrictions on size of boats**: Certain fisheries have limits on the size of fishing boats
- **Restrictions on type of fishing gear**: Virtually every fishery has limitations on fishing gear, such as the size, design, and use of each type of gear
- **Gear prohibition**: Certain gear types are completely prohibited, such as pelagic longlines, sunken gillnets, and fish traps

Alaska also limits the number of harvesters in a fishery through "license limitation" or **"limited entry"**

Additionally, Alaska uses rationalization (also known as "rights-based" management), which grants ownership rights to a given fraction of an annual Total Allowable Catch, and "inseason" modification to adapt to the realities of the run, the weather, and other parameters.

Commissioners E.O. (Emergency Order) Authority can close or open a fishery in mid season, to help achieve escapement goal ranges – in real time not for the following year as in other management.


Fisheries Management
• In season and long term management by ADF&G
• Allocations by the Board of Fisheries
• Permits by Commercial Fishery Entry Commission
• Crew Licenses by ADF&G
• DOR, DEC, DNR, DCCED regulations & reports
• NOAA, NMFS, USCG, EPA, FWS, USDA, IRS…



State of Alaska Commercial Fisheries Entry Commission Issues Permits and Manages Fishing Permit Data Base

- By species, gear, & area
- 26 Species codes A - Z
- Gear types: Seine, Trawl, Gillnet, Setnet, Power Troll, Hand Troll, Pots, Longline, Jig
- Areas codes A-Z
- Altogether there are 336 fishery permit combinations administered by CFEC

Alaska Seafood Marketing Institute

Alaska = Sustainable

- Sustainability is a factor influencing purchasing decisions
- When the world discovered sustainability, Alaska was already there

The Power of the ALASKA SEAFOOD Brand

"82% of consumers surveyed say that seeing the Alaska Seafood logo would increase their likelihood to purchase."

- TRD Frameworks 2009

Consumer Motivation:

- **75% of consumers surveyed feel it is important to know the source or origin of the fish they purchase.**
  - **72% feel it is important the fish they purchase is environmentally sustainable.**
  - **68% feel it is important that the fish they purchase is naturally caught or wild.**
- **64% of consumers prefer fish or seafood caught in the ocean over farm-raised fish.**

Preference for Alaska:

- **Branding with either the Alaska Seafood logo or the name "Alaska" are both positive influencers of purchase behavior and create a positive impression of retailers:**
  - **Use of the word "Alaska" on packaging increases likelihood to purchase among 76% of consumers surveyed.**
  - **82% of consumers surveyed say that seeing the Alaska Seafood logo would increase their likelihood to purchase.**
- **Alaska salmon is preferred by 61% of consumers; no other type of salmon even comes close to this type of preference.**

**Source: TRD Frameworks 2009. Respondents were college educated, upper income grocery shoppers, ages 25-74.*

ASMI Mission:
Increase the economic value of the Alaska seafood resource

Alaska's official seafood promotion arm, supports Alaska seafood industry

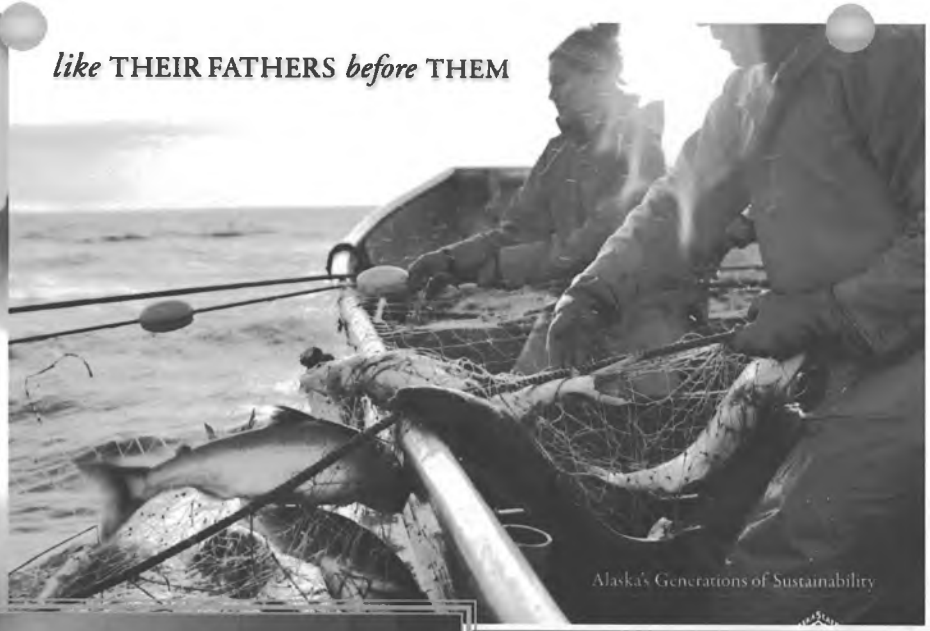
through promotion in the Domestic and International markets of Alaska seafood products, education and research

ALASKA SEAFOOD®

Wild, Natural & Sustainable®


wild alaska seafood
WEEK
October 5-8th
SALMON, SCALLOPS, HALIBUT, AND COD
Come taste and learn why Alaska is the natural state for wild and sustainable seafood. A model for quality, purity and responsible fishing practices; Alaska Seafood is also the perfect ingredient for healthy flavor.
SPEAKER
GUEST CHEF
THURSDAY, OCTOBER 8TH, 5-8PM
IN THE BERKSHIRE DC
www.umassdining.com


ALASKA SEAFOOD
SALMÓN SALVAJE ROJO (sockeye) DE ALASKA
Su carne, firme y poco grasa, destaca por el color rojo intenso. Crudo, marinado, ahumado o asado, transmite el auténtico sabor del salmón natural.


like THEIR FATHERS before THEM
Alaska's Generations of Sustainability


Vanguard


G FOR SOLUTIONS
ALASKA SEAFOOD
Seafood Marketing Institute
ALASKA SEAFOOD





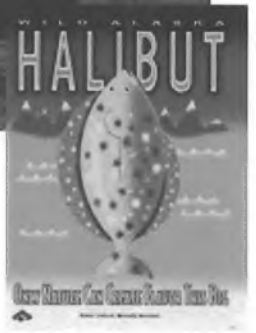



来自美国 Bal拉斯加
天与化比的海鲜




WILD
ALASKA SEAFOOD
PRODUCT OF USA


See who's behind the great flavor of Alaska seafood.
Alaska Salmon
Alaska Whitefish
Alaska Shellfish
ALASKA SEAFOOD: the big appeal of smaller portions


HALIBUT

Alaska Seafood Brand Equity – Alaska Seafood held second place among food brands on U.S. menus in 2008

Thanks to Alaska's commitment to science-based management, fishing and seafood are part of our economic future.

The management of Alaska's seafood resources is a model for the world . . .

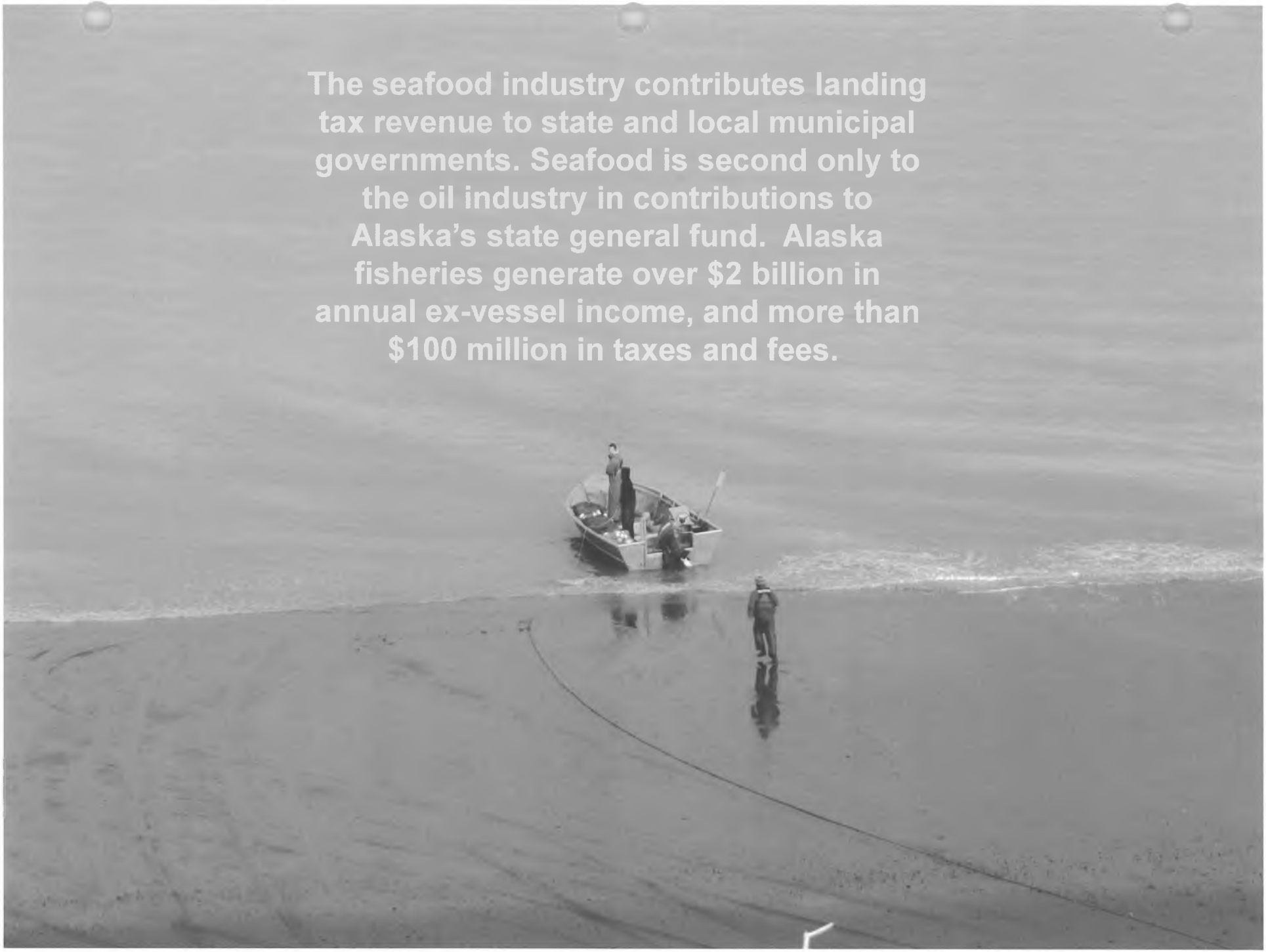
ALASKA SEAFOOD

Wild, Natural & Sustainable®

Alaska seafood ranks second among the three most popular food brands on U.S. menus.

ASMI PLAYS A UNIQUE ROLE:

THROUGH ASMI, MANY INDIVIDUALS REPRESENTING THE MANY DIVERSE FACETS OF THE ALASKA SEAFOOD INDUSTRY – PROCESSORS AND HARVESTERS, AND OTHER DIFFERENT HARVEST SECTORS WORK TOGETHER FOR THE GOOD OF ALL.


The seafood industry contributes landing tax revenue to state and local municipal governments. Seafood is second only to the oil industry in contributions to Alaska's state general fund. Alaska fisheries generate over $2 billion in annual ex-vessel income, and more than $100 million in taxes and fees.



UFA promotes positive relations between Alaska fishermen and fishing groups, processing and transportation sectors of the fishing industry, and state and federal government agencies and elected officials to further our mission. Through these efforts we have worked with the Legislature to successfully pass over 50 fishery-related bills in the Alaska legislature from 2002 to 2010.


Alaska's fisheries are viewed as a
model for sustainable management
worldwide.




Kari Jean
75743

In 2002 there were many that predicted that Alaska salmon fisheries would be out of business



The Alaska Legislature responds to Salmon Crisis: Joint Legislative Salmon Industry Task Force 2002 - 2004

- Regional Seafood Development Associations that can be voted in by fleets for their own marketing or development projects were authorized (JLSITF).
- State measures were adopted for labeling of wild vs. farmed (JLSITF) and genetically modified seafood (Sen. Elton),
- Regional Seafood Development Associations that could be funded by a vote of fishermen in a given fleet where these were wanted (JLSITF).
- Direct Marketing: SB 286 (JLSITF) streamlined the paperwork and reduced the tax burden on fishermen who sell their own catch.
- A product development tax credit encouraged a transition to fillets, burgers, and other new products (JLSITF) .
- In 2004 JLSITF legislation, ASMI funding based on salmon was replaced by a voluntary assessment across the entire Alaska seafood spectrum for a more stable funding base.
- ASMI board streamlined to seven seats
- Processor sector has renewed voluntary assessment since



UFA thanks the Alaska Legislature for its attention to our industry

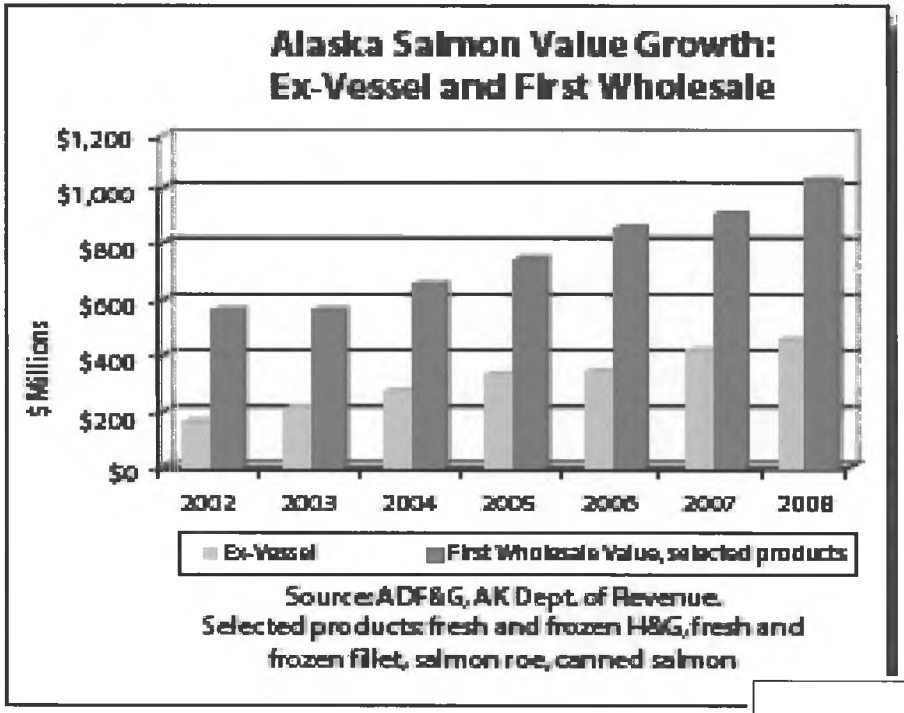


- HJR 46, a resolution opposing Chilean farmed salmon.
- HJR 45 supporting the labeling of wild salmon.
- SCR 30 designating June 30 as "Alaska Salmon Day".
- HB 287 exempting permit holders from having their permits seized
- HB 462 regarding confidentiality of fishing records
- SB 266 allowed hatcheries to refinance
- HB 286 allows the ownership of two limited entry permits
- HB 288 regarding CFEC optimum number studies
- SCR 28 established the Joint Legislative Salmon Industry Task Force
- HCR 6 - Extended the Joint Legislative Salmon Industry Task Force
- HB 105 - Concerning loans for past due federal taxes and removing the 1/2 % refinancing fee for Division of Investment state loans
- SB282 - Identification of wild and farmed finfish
- HB 104 - Regarding the Fisheries Business Tax
- SB 139 - Renewed the Alaska Salmon Price Report
- HB 118 - Allows fishermen to transport fish for other fishermen
- HB 90 - Salmon Product Development Tax Credit
- SB 215 - Created a new Food Safety Lab in Anchorage
- SCR13 - Alaska Salmon in Correctional Facilities
- HB 409 - Removed the 58' Seine Vessel Length limit from statute
- SB 315 - Use non-state funds for CFEC Entry Permit Buy-Back Programs
- SB 286 - Established a new direct marketing fisheries business license
- HB 419 - Created Regional Seafood Development Associations
- HJR 34 - Requested improvements to the USDA TAA program for Alaskan salmon
- SB 273 - Changed ASMI structure and stabilized its seafood based funding
- SB 322 - Salmon Enhancement Tax
- SCR 19 - Promoted fisheries education

UFA thanks the Alaska Legislature for its attention to our industry

- HB 341 - Expanded the possible range of dive fishery management assessments
- HB 478 - Commercial Fishing Interim Use Permits
- SB 387 - Loans for Community Quota Shares
- HJR 36 - Commercial Fishing Closures and Restrictions in Glacier Bay National Park
- HJR 44 - Sea Otter Research
- SJR 26 - Tustumena Lake enhancement
- HB 295 - Extended the State Navigable Waters Commission
- HB 26 - 7 Day Crew license
- SB 305 - Asserting State Title to Submerged Lands
- SB 126 - Shellfish mariculture standing stock
- HJR 15 - Resolution opposing offshore aquaculture
- HB 161 - Retire - Rehire renewal
- SB 25 - Genetically modified fish labeling
- SB 93 - Fishery and vessel permit fee changes
- HJR 6 - Regarding the labeling of seafood
- HJR 9 - Exxon Valdez resolution
- SB 164 - Renewed the salmon product development tax credits
- HB 251 - Removed the statutory prohibition on privileges for holders of two permits in a fishery
- HB 218 – Cost recovery fishery option
- HB 484 – Proceeds from reissued fishery permits
- SB 291 – Establishing a muncipal harbor facility grant program

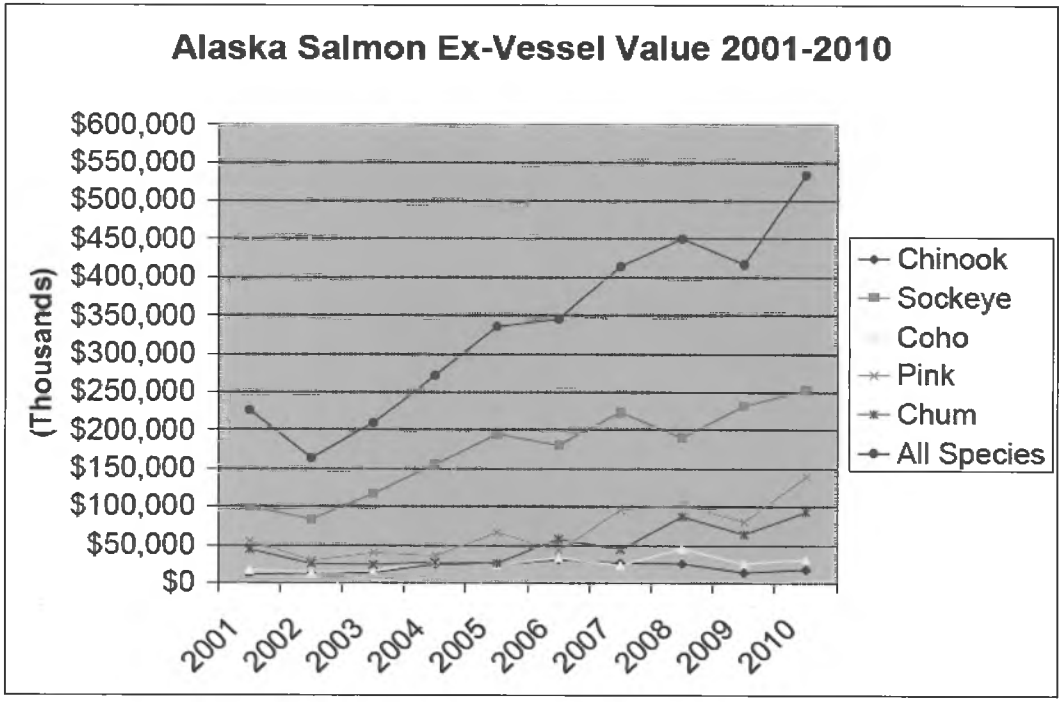




Thanks to the Alaska State Legislature, DCCED, ADF&G, the Alaska delegation, and recent administrations

But we cannot rest on our laurels.

Fisheries, communities, and opportunities are interdependent, markets are competitive, resources are vulnerable, and challenges are constant and dynamic…





Looking forward: Needs of the Alaska Fishing Industry

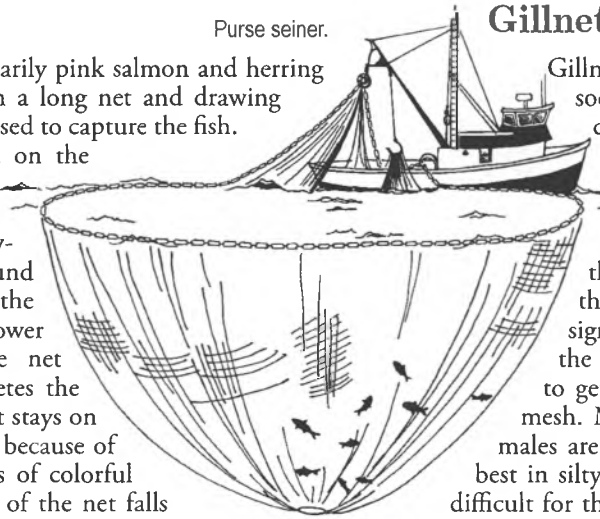
- Not looking to reduce taxes or weaken regulations
- Regulatory stability = business stability
- Recognition of fisheries as integral to the social and economic fabric of the state
- Maintain ADF&G Budget=sustainability=personnel retention
- Continued State support for ASMI budget
- Support opportunities for increased & enhanced salmon and other seafood harvests for all user groups
- Fill the pipeline based on sound economic and environmental policies
- Support for regional energy and transportation infrastructure initiatives

Photos and images courtesy of the
Alaska Seafood Marketing Institute and Arni Thomson



What kind of fishing boat is that?

Purse Seiner


Purse seiner.

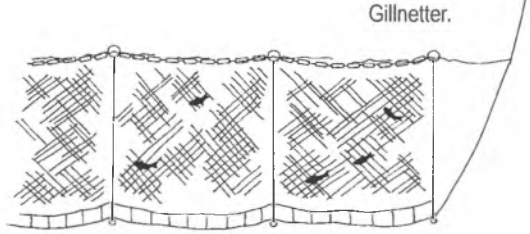
Purse seiners catch primarily pink salmon and herring by encircling them with a long net and drawing (pursing) the bottom closed to capture the fish. The net is first stacked on the stern of the boat and then played into the water while the boat travels in a large circle around the fish. The far end of the net is attached to a power skiff, which holds the net while the seiner completes the circle. The top of the net stays on the surface of the water because of its *float line*—thousands of colorful floats—and the bottom of the net falls vertically because of its weighted *lead line*. As a result, the net hangs like a curtain around the school of fish. The vessel crew then purses its bottom with a *purse line*. The lines and the net are pulled up with a hydraulic power block (winch). Once most of the net has been retrieved, with the remainder of it lying in a *bag* alongside the vessel, the fish are dipped from the bag and into the vessel's hold. For large catches of herring, a buying vessel or tender comes alongside the fishing vessel and lowers the end of a fish pump into the bagged purse seine. The herring are then brought aboard the tender and into its hold without ever going aboard the seiner. Sometimes referred to as *limit seiners*, purse seiners are sleek, cabin-forward vessels that are limited by Alaska law to 58 feet in order to more precisely manage their fishing effort. They are recognized by their long, clean decks, the boom with its power block, the net stacked on the back, and the power skiff that is often seen riding piggyback aboard the vessel's stern while it is traveling. When fishing, of course, the circle of floats on the surface of the water, and the power skiff assisting with the operation, are sure giveaways. Seine-caught salmon are delivered *in-the-round* (whole) to buying stations and canneries where they end up as canned and frozen products. Herring are delivered to processing plants where they are either stripped of their roe (eggs), or packaged as bait for other commercial fisheries; e.g., the longline fisheries and the crab fisheries. Salted herring roe, called *kazunoko*, is shipped to Japan where it is a high-priced delicacy.

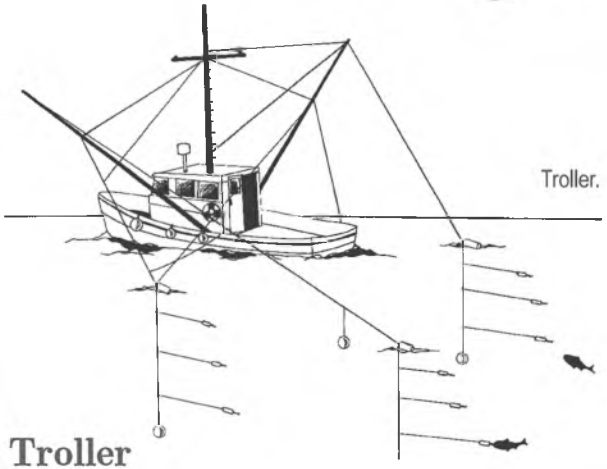
Gillnetter

Gillnetters catch salmon—primarily sockeye, chum, and coho—by setting curtain-like nets perpendicular to the direction in which the fish are travelling as they migrate along the coast toward their natal streams. The net has a float line on the top and a weighted lead line on the bottom. The mesh openings are designed to be just large enough to allow the male fish, which are usually larger, to get their heads stuck, or *gilled*, in the mesh. Much larger fish and the smaller females are not so readily gilled. Gillnets work best in silty or turbid water which makes them difficult for the fish to see. Gillnet vessels are usually 30 to 40 feet long. They are easily recognized by the drum on either the front, a *bow picker*, or the stern, a *stern picker*, on which the net is rolled. Net retrieval is by hydraulic power which turns the drum. Fish are removed from the net by hand, *picking* them from the mesh as the net is reeled onboard. Gillnet-caught salmon are usually iced and delivered to buyers and cold storages. Historically, their ultimate destination was the canned market, though a growing market for frozen product has developed overseas.

Setnetting is a small-scale type of gillnetting done by hand from a skiff or from shore, usually by local families. There are no hydraulics. Nets are fixed and are held onshore or offshore with anchors.

Skiffs are used to set nets—one end on shore, other anchored off shore. Sometimes both ends are in the water most of the time and when a cork bobs the fish is pulled out. After salmon are picked from nets they are iced down and delivered to large collection boats, called *tenders*.


Gillnetter.


Troller.

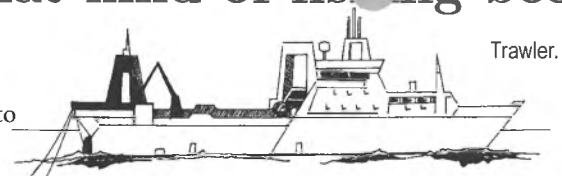
Troller

Troll vessels catch salmon, principally Chinook, coho, and pink salmon, by "trolling" bait or lures through feeding concentrations of fish. The word *troll* comes from a medieval German word, *trollen*, and refers to the revolving motion of the bait or lures used in this type of fishing. Typically, four to six main wire lines are fished, each of which may have up to a 50 pound lead or cast iron sinker or *cannon ball* on its terminal end, and 8 to 12 nylon leaders spaced out along its length, each of which ends in either a lure or baited hook. To retrieve hooked fish, the main lines are wound about small, onboard spools via hand crank (hand trollers) or with hydraulic power (power trollers), and the fish are gaffed when alongside the vessel. The leaders are then rebaited and let back down to the desired depth(s). Troll vessels come in a variety of sizes and configurations, ranging from small, hand troll skiffs to large, ocean-going power troll vessels of 50 feet or more in length. Troll salmon fishermen operate throughout Southeast Alaska in both state and federal waters. The troll salmon fishery produces a low-volume, high-quality product. Troll-caught salmon are dressed at sea and sold either as a fresh or frozen product. High-end grocery stores and fine restaurants are the final destination.

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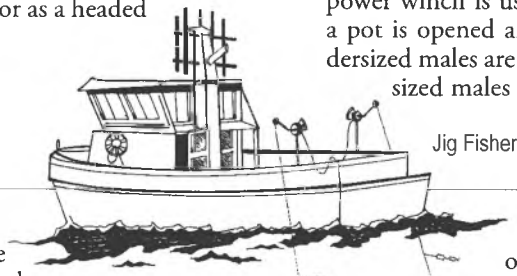
What kind of fishing boat is that?

Trawler


Trawler.

Trawlers are sometimes confused with trollers due to their similar sounding names. Trawlers typically catch large quantities of midwater species such as pollock or pink shrimp, and bottomfish such as flounder, by towing a large, cone-shaped net. Most trawl nets have *doors* on either side of the net's opening to help hold it open, and some that are fished near the bottom have a heavy chain strung along the bottom of the opening to hold it close to the sea floor. The net is retrieved using huge winches and a power drum upon which the net is rolled as it is brought aboard. The end of the net, the *bag* or *cod end*, holds the fish and is usually pulled right up into the back of the vessel on a slanting stern ramp. Trawlers are generally large vessels; the largest in the ocean pollock fishery are factory trawlers that possess onboard processing facilities. These can be up to 600 feet in length. Catches are often enormous, with a two-hour tow of the net yielding up to 100 tons or more depending on the fishery, the size of the vessel, and the concentration of fish in the area. The trawl fishery may process its catches into either fillets destined for the fresh and frozen market, or minced fish called *surimi*, which is manufactured into fish sticks and similar products such as artificial king crab. Shrimp fishermen sort their catches by size and species and sell the product as either a whole frozen product, or as a headed frozen product.

Jig Fisher


Jig Fisher.

Commercial jig fishing, also known as *automated handlining*, is a method of fishing using hooks with lures which are *jigged* up and down in the water. Jigs create a jerky, vertical motion, unlike spinnerbaits which move through the water horizontally. The jig is very versatile and can be used in both salt water as well as fresh water. Jig fishing techniques have been used for centuries by European vessels fishing Icelandic, Newfoundland and North Sea fishing grounds. Many of the techniques used then are still in use today.

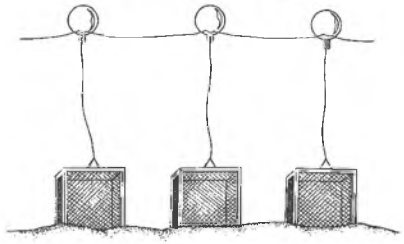
In recent years however, the advent of hydraulic or electric automated jigging machines has eliminated much of the manual labor required to haul fish from great depths. Modern automated jigging machines are equipped with a computerized motor which enables the machine to automatically haul in the catch when a specified weight of fish is hooked. This improves the efficiency and accuracy of the fishing system, and also reduces bycatch and discards. You are effectively catching a quality fish straight from the sea.

Jig fishing is also extremely beneficial in the face of increased fuel costs as boats actually fish with the engine switched off.

Crabber

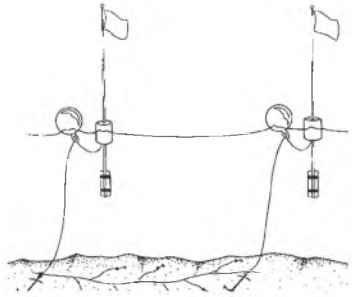
Crabbers target Dungeness, king, and snow crab using twine or wire-meshed steel pots (traps). Baited with herring or other fresh bait, the pots are left to soak for several days. A line extends from each pot to a surface buoy that marks its location. There are several configurations for the pots, though in general, the smaller round pots are fished for Dungeness in shallow bays and estuaries, and the large, heavy, rectangular pots are fished in waters deeper than 100 feet for king and Tanner crab. A power winch is used to retrieve the pots. Once aboard, a pot is opened and the catch sorted. Females and undersized males are discarded alive over the side and legal-sized males are retained in aerated seawater tanks.

Crab boats come in a variety of shapes and sizes, from aluminum skiffs with outboard motors that fish the inside waters for Dungeness, to seagoing vessels of 100 feet or more that ply the Bering Sea and the Gulf of Alaska for king crab. Unless one happens to see a crabber headed for the fishing grounds with its decks stacked with pots, identification of a vessel as a crabber might be difficult for the casual observer. Crabs are delivered live to shore stations where they are cooked and then either canned or sold as a fresh or frozen product. A small number are sold live in local markets through retail outlets that have circulating seawater holding tanks.


Crab pots.

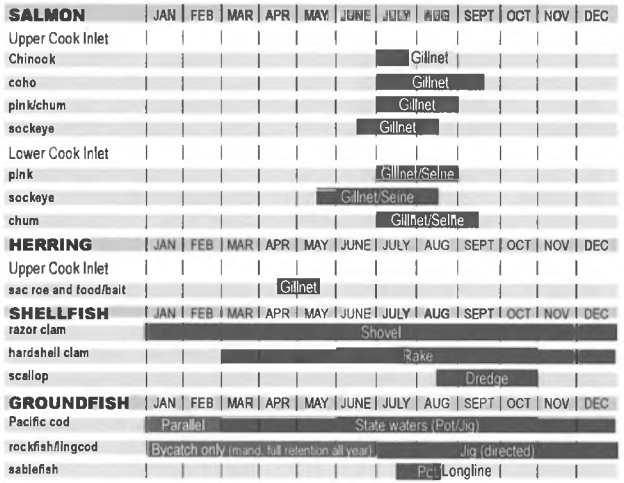
Longliner

Longliners catch bottomfish, primarily halibut, blackcod, lingcod, and rockfish, via a long line that is laid on the bottom. Attached are leaders or *gangions* with baited hooks. Each longline can be up to a mile in length and have thousands of baited hooks. The lines are anchored at each end of each set. Lines at the ends run to the surface and are marked with a buoy and flag. A longline vessel typically sets several lines for a 24-hour soak. The lines are retrieved over a side roller with a power winch, and the fish caught are bled or dressed and then packed in ice in the vessel's hold. Longliners are typically large vessels, 50 to 100 feet in length, with a weather cover on the stern to protect the crew. The longlines are coiled and stacked on deck in tubs when not in use. Most vessels in this fishery can pack 20 to 40 tons or more of iced product before returning to port. Longliners are readily identified by their weather cover and, when not fishing, by the numerous orange buoys and flags that are tied along their rails. This fishery delivers its catch whole and bled (rockfish), or whole and gutted (halibut), or headed and gutted (blackcod and lingcod) for subsequent sale to fresh and frozen markets.

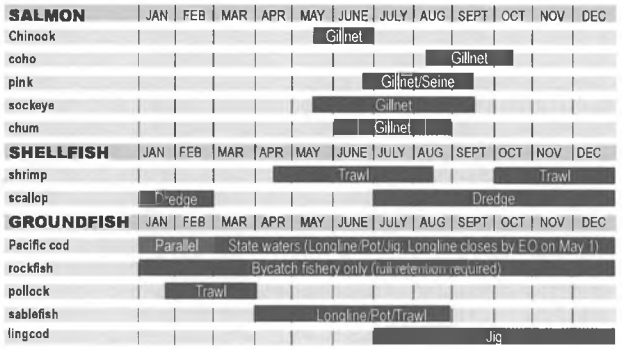

Longlines.

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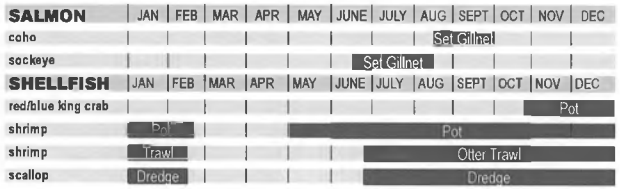
Cook Inlet



Prince William Sound/Copper River

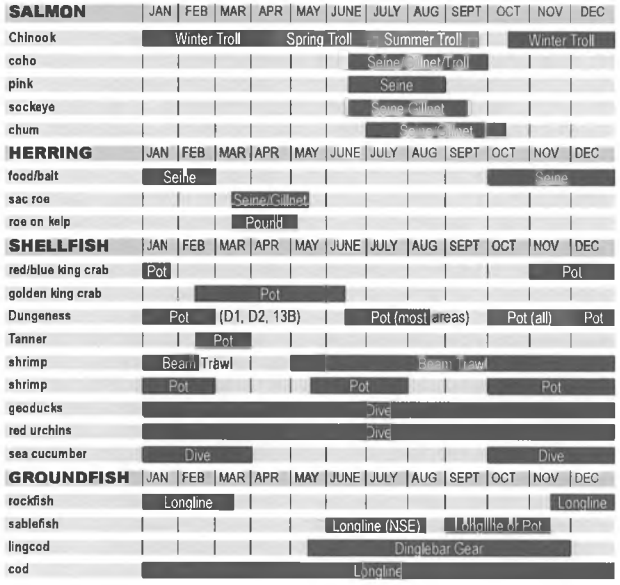


Yakutat



Tanner and Dungeness crab fisheries are closed until further notice.

Southeast Alaska



Commercial Fishing Seasons in Alaska

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http://www.cf.adfg.state.ak.us/geninfo/pubs/seasons/season_2.pdf

This summary is intended as a general guide only and is non-binding. For detailed regulatory information refer to official codes.

Season lengths indicated in this summary are subject to closure by emergency order as guideline harvest objectives are met or as deemed necessary by conservation concerns.



Published February 2010.

Arctic-Yukon-Kuskokwim

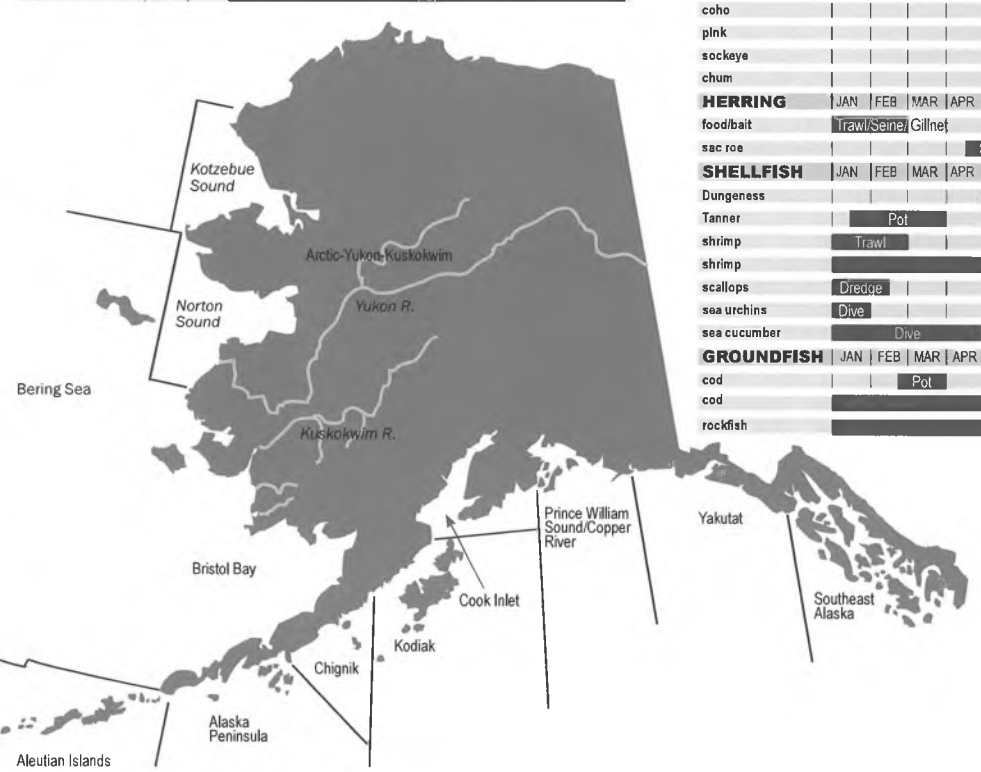
SALMON	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Kuskokwim River												
coho								Gillnet				
chum							Gillnet					
Yukon River												
Chinook						Gillnet or Fishwheel						
summer chum						Gillnet or Fishwheel						
fall chum							Gillnet or Fishwheel					
Norton Sound												
Chinook							Gillnet					
coho								Gillnet				
pink							Gillnet					
chum							Gillnet					
Kotzebue Sound												
chum								Gillnet				
HERRING	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
sac roe					Gillnet	or Seine						
roe on kelp												
SHELLFISH	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Norton Sound												
red king crab	Pot						Pot				Pot	

Alaska Peninsula

SALMON	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
South Peninsula												
coho								Gillnet/Seine				
pink							Seine					
sockeye							Gillnet/Seine					
chum							Gillnet/Seine					
North Peninsula												
coho								Gillnet/Seine				
sockeye							Gillnet/Seine					
HERRING	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
North/South Peninsula												
sac roe						Seine						
Dutch Harbor												
food/bait								Gillnet/Seine				
SHELLFISH	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Dungeness						Pot						
Tanner		Pot										
shrimp	Pot											
shrimp	Trawl					Trawl						
scallops	Dredge						Dredge					
GROUNDFISH	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
cod	Pot/Jig											
rockfish	Pot											

Bristol Bay/Bering Sea/Aleutian Islands

SALMON	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Chinook						Gillnet						
coho							Gillnet					
sockeye						Gillnet						
chum						Gillnet						
HERRING	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
sac roe					Gillnet/Seine		Bait					
roe on kelp					Hand							
SHELLFISH	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
red/king crab	Pot										Pot	
bairdi Tanner	Pot										Pot	
opilio Tanner	Pot										Pot	
blue king crab												
brown king crab	Pot							Pot				
GROUNDFISH	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
cod	Pot											



Chignik

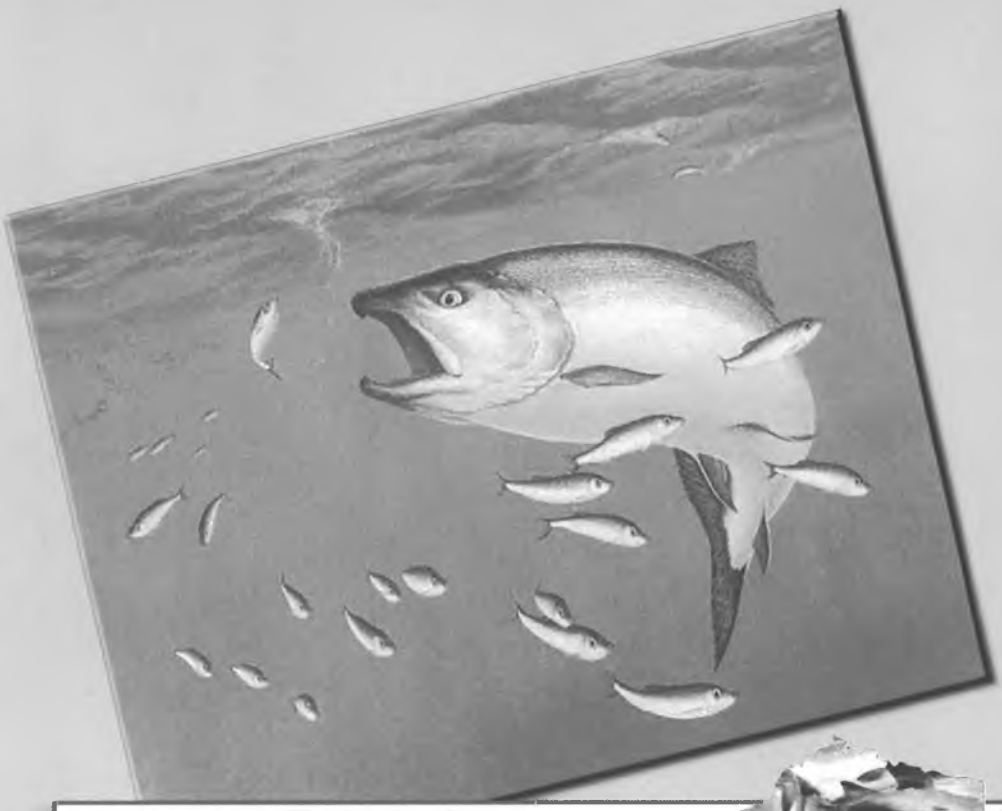
SALMON	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Chinook							Purse Seine					
coho								Purse Seine				
pink								Purse Seine				
sockeye							Purse Seine					
chum								Purse Seine				
HERRING	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
sac roe					Purse Seine							
GROUNDFISH	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
cod	Pot and Jig											
rockfish	Jig											

Kodiak

SALMON	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
coho								Seine/Gillnet				
pink								Seine/Gillnet				
sockeye							Seine/Gillnet					
chum								Seine/Gillnet				
HERRING	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
food/bait	Trawl/Seine/	Gillnet								Trawl/Seine/Gillnet		
sac roe					Seine/Gillnet							
SHELLFISH	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Dungeness					Pot							
Tanner		Pot										
shrimp		Trawl					Trawl					
shrimp		Pot										
scallops		Dredge					Dredge					
sea urchins		Dive								Dive		
sea cucumber		Dive								Dive		
GROUNDFISH	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
cod		Pot										
cod	Pot/Jig											
rockfish	Jig											

3/15/11 Overview: Commercial Fisheries Entry Commission

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CFEC

Commercial Fisheries Entry Commission 2009 Annual Report



"King of the Sea"
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Ed Mills

Inside photo courtesy of
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Publication design and layout
Shirley Penrose



The Commercial Fisheries Entry Commission Annual Report
is published in accordance with AS 16.43.980

STATE OF ALASKA
COMMERCIAL FISHERIES ENTRY COMMISSION
2009 ANNUAL REPORT

Dear Governor, Legislators, and Fellow Alaskans:

We are pleased to submit the Commercial Fisheries Entry Commission's 2009 Annual Report, pursuant to AS 16.43.980.

Following years of disastrous salmon seasons and several failed attempts to limit access to Alaska's salmon fisheries, Alaska voters, in 1972, approved a constitutional amendment authorizing limitation of entry to commercial fisheries. In 1973, the Alaska Legislature enacted the Limited Entry Act creating a system for limiting the number of participants in Alaska's commercial fisheries. In 1974, 35 years ago, the Commercial Fisheries Entry Commission began the program. By the end of 2009, the CFEC has limited 68 fisheries, finally determined more than 22,740 individual applications, and issued 1,432,359 annual permits and licenses.

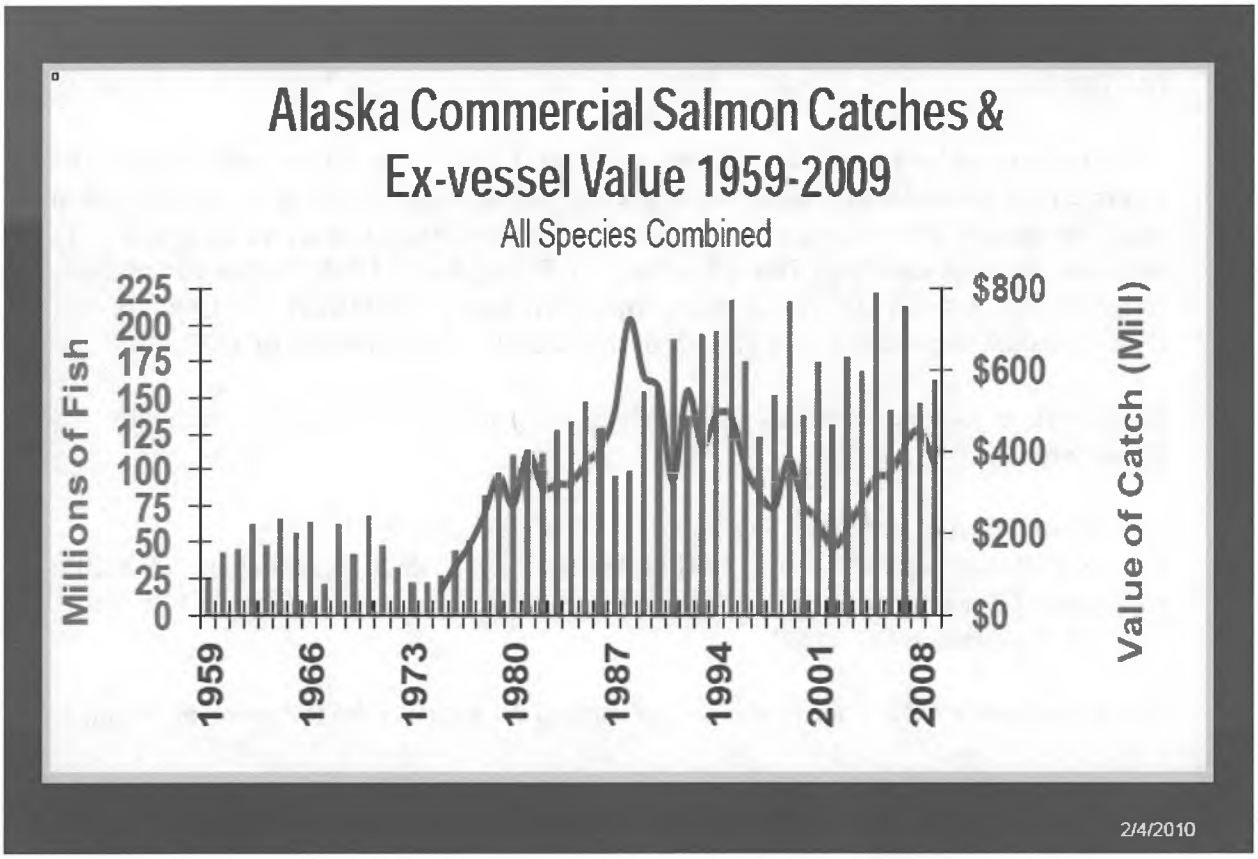
During 2009, the Commission issued more than 29,000 annual fishing permits and vessel licenses, reviewed more than 1,900 transfer requests, and issued 118 adjudicatory decisions. As of the end of 2009, there were 52 cases before the Commission at various stages of adjudication.

Working with the Legislature, the Administration, and the fishing industry in 2009, the Commission continued to provide fisheries data, as well as information concerning options, statutory tools, and protections needed to meet the challenges facing Alaska's evolving fisheries. The Commission also continued to work closely with fishermen, organizations, communities, state and federal agencies, the Alaska Board of Fisheries, and the North Pacific Fisheries Management Council on issues of importance to Alaska's commercial fishing industry.

We remain dedicated to our role in promoting conservation and sustained yield management of Alaska's fishery resources and supporting economic stability among fishermen and those dependent upon them for a livelihood. We are proud to be part of an internationally renowned fishery management system that produces food for the world and supports the economic health of thousands of Alaskans.

Sincerely,

COMMERCIAL FISHERIES ENTRY COMMISSION
Frank Homan, Chairman
Peter Froehlich, Commissioner
Bruce Twomley, Commissioner



Millions of fish (bars) Value of catch (line)



Photo Courtesy of The Alaska Seafood Marketing Institute (ASMI)

OEO/ADA Compliance Statement

The Commission is administratively attached to the Alaska Department of Fish and Game (ADF&G).

The Alaska Department of Fish and Game (ADF&G) administers all programs and activities free from discrimination based on race, color, national origin, age, sex, religion, marital status, pregnancy, parenthood, or disability. The department administers all programs and activities in compliance with Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act of 1990, the Age Discrimination Act of 1975, and Title IX of the Education Amendments of 1972.

If you believe you have been discriminated against in any program, activity, or facility please write:

- ADF&G ADA Coordinator, P.O. Box 115526, Juneau, AK 99811-5526
- U.S. Fish and Wildlife Service, 4401 N. Fairfax Drive, MS 2042, Arlington, VA 22203
- Office of Equal Opportunity, U.S. Department of the Interior, 1849 C Street NW MS 5230, Washington DC 20240.

The department's ADA Coordinator can be reached via phone at the following numbers:

- (VOICE) 907-465-6077
- (Statewide Telecommunication Device for the Deaf) 1-800-478-3648
- (Juneau TDD) 907-465-3646
- (FAX) 907-465-6078

For information on alternative formats and questions on this publication, please contact the Commercial Fisheries Entry Commission at (907) 789-6160.

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	Peter Froehlich, Commissioner
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Introduction

The commercial fishing industry is a major component of Alaska's economy and is the economic backbone of Alaska's coastal communities. Our seafood industry is one of the state's largest sources of private sector jobs. The Alaska Commercial Fisheries Entry Commission (CFEC or Commission) plays an essential management role in developing and sustaining Alaska's billion dollar fishing industry.

The Limited Entry Act directs the Commission to promote the conservation and sustained yield management of Alaska's fishery resources, and the economic health and stability of the fishing industry, by regulating entry into the state's commercial fisheries. To meet these responsibilities, the Commission organizes its staff into four sections: Adjudications, Research, Licensing, and Information Technology (see chart on page 3).

The Commission engages in the following activities mandated by law (AS 16.43):

- Establishes maximum numbers of entry permits for fisheries to be limited and administers applications and point systems to rank eligible applicants;
- Processes entry permit applications and adjudicates claims not resolved in initial classification;
- Issues annual permits in limited and unlimited fisheries, and issues annual licenses for all commercial vessels as required to legally participate in the state's commercial fisheries;
- Issues vessel permits in two fisheries under vessel-based limitations;
- Processes requests for emergency and permanent transfers of entry and interim-use permits and compiles data on all such transfers;
- Enforces provisions of the Limited Entry Act by regulating permit transfer activities;
- Participates in the research and development of comprehensive fisheries economic data;
- Works with other state and federal management agencies to develop, analyze, and coordinate fisheries policies;
- Assesses demerit points against permit holders for convictions of violations of commercial fishing laws in the salmon fisheries.

The Commission has limited entry into 68 of Alaska's fisheries and continues to receive petitions for the limitation of additional fisheries and works with fishermen and the Department of Fish and Game to analyze these requests.

The percentage of limited entry permits held by Alaska residents has remained relatively stable. After thirty-five years, Alaskans hold about 76% of all limited entry permits. At the end of 2009, Alaskans held more than 11,000 permanent limited entry permits, with rural Alaskans holding more than half of that number.



For calendar year 2009, the Commission issued more than 29,000 permanent permits, interim-use permits, and vessel licenses and reviewed more than 1,900 permit transfer requests. In fiscal year 2009 (July 1, 2008 to June 30, 2009), the Commission collected $6 million in revenues for the State.

The economic challenges facing the salmon industry have generated substantial discussion about potential cost efficiencies in the fisheries, including consideration of options for reducing fleet size. The Commission continues to participate in this ongoing discussion with the public and policy makers, and to provide data to assist and inform the exploration of ideas (see Decisions and Activities section for more information, page 4).

By working with other state and federal agencies throughout 2009, the Commission continued to help Alaska fishermen protect their fishing privileges. For example, during 2009, the Commission worked with the Southeast Revitalization Association (SRA) to develop legislation to assist their efforts to implement a permit buyback program for the Southeast Alaska purse seine salmon fishery in conjunction with the National Marine Fisheries Service under term of the Magnuson-Stevens fishery act. In the initial phase of the fleet reduction program, 35 southeast seine permits were relinquished.

Alaska's fishing industry is vital to the state's economy and provides an important food source to the world. Alaskans must continue to ensure that our fisheries are developed wisely and sustained through sound management.

In addition to working with policy makers, agencies, fisheries organizations, and individual fishermen on the many pressing issues facing the fishing industry, the Commission continues to perform its primary functions of limiting fisheries, licensing fishermen and vessels, adjudicating claims, performing critical research, and providing data to governmental agencies, private organizations and the general public.

Major decisions and activities of the Commission in 2009 are outlined in this report. Prior years' activities, events, and decisions that affected the Commission's operations are highlighted in the appendices.

Alaska's fishing industry is vital to the state's economy and provides an important food source to the world. Alaskans must continue to ensure that our fisheries are developed wisely and sustained through sound management. We at the Commission are committed to fulfill our statutory role in achieving this goal.



Organization by Function

Commercial Fisheries Entry Commission

Commissioners

Frank Homan, Chairman
Peter Froehlich, Commissioner
Bruce Twomley, Commissioner

Shirley Penrose
Administrative Officer

Personnel, Payroll, Travel, Accounting, Purchasing, Facilities/ Property/Supply Management, and Budget Development

Adjudications

Frank Glass
Project Leader

- Application Processing and Classification
- Administrative Hearings
- Case Management
- Decisions on Claims
- Preparation of Official Record in Judicial Appeals
- Residency and Fraud Investigations

Licensing

Yvonne Fink
Project Leader

- Entry and Interim-use Permit Renewal
- Vessel Licensing
- Permanent and Emergency Transfers
- Permanent File Management
- Revenue Accounting

Research

Kurt Schelle
Project Leader

- Fisheries Data Collection
- Economic Profiles
- New Limitations Research
- Priority Hardship ("Point" System) Development and Testing
- Optimum Number Research

Information Technology

Ty McMichael
Project Leader

- Licensing Systems
- Fisheries Database
- Technology Development for Adjudications and Research
- Agency Technical Support
- Website Design and Maintenance

Decisions and Activities

Information Sharing with ARDORs

In 1988, the legislature created the Alaska Regional Economic Assistance Program to encourage and assist locally-driven economic development in Alaska. There are 12 Alaska Regional Development Organizations ("ARDORs") operating under the program, which was reauthorized by the legislature in 2008. A majority of the ARDORs cover regions which rely substantially on commercial fishing to sustain their economic base.

In early 2009, State Senator Donny Olson introduced Senate Bill 3, which allows the ARDORs free access to all non-confidential records held by the Commercial Fisheries Entry Commission. This includes research material produced by CFEC that could be of great assistance to the ARDORs in understanding the economic trends and emerging development opportunities in their regions

Senate Bill 3 was strongly supported by CFEC through the hearing testimony and written support of Chairman Frank Homan. Senate Bill 3 passed both houses of the legislature, and was signed into law on July 13, 2009 (Chapter 58 SLA 2009).

Carlson Class Action

In 2009, CFEC continued to assist the Department of Law in its efforts to represent the State of Alaska in *Carlson v. State, CFEC*, the class action that challenged the permit and license fees charged to nonresident commercial fishermen. CFEC staff assembled and reviewed payment data on over 95,000 class members in order to ascertain what, if any, refund might be owed to them by virtue of various rulings made by the courts during the lengthy case. In April, the State filed a report to the court based on that data. Following the filing of the report, CFEC continued to work with the Department of Law to help seek an equitable agreement with the class's attorney on how any refunds should be implemented. CFEC also added a new section to its website regarding the *Carlson* case: http://www.cfec.state.ak.us/mnu_Carlson_Information.htm.

CFEC Decision Affirmed by Alaska Supreme Court

On December 11, 2009, the Alaska Supreme Court issued a unanimous decision in *Kuzmin v. State, CFEC*, which affirmed the Commission's denial of a past participation claim for the 2001 Kodiak Tanner crab harvest based on partnership. The court ruled that substantial evidence supported a finding that Kuzmin failed to prove he was in joint control of the fishing operation, and that he failed to establish that CFEC regulation defining partner as one in joint control was invalid.



Sitka Superior Court Affirms CFEC in Two Decisions

On February 10, 2009, Sitka Superior Court Judge David V. George affirmed the Commission's decision in *Hakala v. State, CFEC*. The court upheld the CFEC's determination that Hakala failed to prove that extraordinary circumstances prevented his participation in the 1984 Northern Southeast Inside sablefish longline fishery.

On June 29, 2009, Judge George affirmed the Commission's decision in *Petticrew v. State, CFEC*. The court found that CFEC's conclusion that Petticrew failed to meet his burden of proof that extraordinary circumstances prevented his participation in the Northern Southeast Inside sablefish fishery during 1982-1984, was supported by the record and that CFEC engaged in reasoned decision-making in reaching that conclusion.

Online Licensing System

In November 2008, the Commission launched a new online permit and vessel license renewal service. Permit holders can renew permits and vessel licenses at the Commission's web site: www.cfec.state.ak.us.

Commission staff renewed 3,485 permits and 1,696 vessel licenses for 2009, through the online system, and 2,681 fishermen used the system. Alaskans representing every region of the state have successfully used the online system.

In November 2008, the Commission launched a new online permit and vessel license renewal service. Permit holders can renew permit and vessel licenses at the Commission's web site: www.cfec.state.ak.us

In addition to direct access by personal computer, the Commission established online renewal kiosks at Alaska Department of Fish and Game (ADF&G) offices in Anchorage, Sitka, and Kodiak, where the public can renew permits and vessel licenses online. In 2009, the Commission expanded this service to other Alaska Department Fish and Game offices located in Cordova, Craig, Ketchikan and Homer.

Other Activities

In late February, 2009, Commissioner Peter Froehlich participated in 3 days of the Alaska Board of Fisheries meeting in Sitka, to assist in consideration and deliberations on several restructuring proposals related to Southeast Alaska finfish management.

On April 23 and 24, 2009, Commissioner Peter Froehlich represented the commission at the reformatted annual ComFish exposition in Kodiak. He was able to meet with dozens of permit holders at the booth shared with Division of Investments and CFAB, and demonstrate the new Online renewal system.

From November 18 to November 21, 2009, all three CFEC Commissioners and several staff members participated in the "Fish Expo" in Seattle, Washington. CFEC traditionally staffs a booth at this event, the purpose of which is to assist fishers with permit issues and to further the public's understanding of the duties of the Commission.

From December 3 to 9, 2009, Commissioner Peter Froehlich and Research Project Leader Kurt Schelle participated in the Alaska Board of Fisheries meeting in Anchorage, assisting in consideration and deliberations on several restructuring proposals related to management of finfish in the Bristol Bay area. The commission provided several memoranda and reports to the Board for this meeting, and after substantial debate, the board decided by 3-3 tie votes, not to make changes related to permit stacking or the 32-foot vessel length limit for drift gillnetters. The board did vote, however to allow additional gear for set netters with more than one permit, similar to what was done for the Kodiak set net fishery a season earlier.

During 2009, Commissioner Bruce Twomley served as a witness and consultant for the Office of Public Advocacy and Alaska Legal Services to ensure that applicants for Medicaid and SSI disability were not unfairly denied benefits because they held an Alaska limited entry permit.



Photo courtesy of the Alaska Seafood Marketing Institute (ASMI)

Adjudications

Overview

The Adjudications Section evaluates, classifies and adjudicates applications for limited entry permits. Permit applicants are classified and ranked against each other under point systems that measure each applicant's past participation and economic dependence on a fishery. Entry permits are issued first to applicants shown by their point levels to be most dependent on a fishery and then to applicants at successively lower classification levels, until a maximum number of permits for the fishery has been issued.

Adjudication functions are performed by a paralegal, a hearing officer and the Commissioners. The paralegal evaluates entry permit applications and makes the initial determination accepting, denying or classifying each application. An applicant may challenge the denial or classification of an entry permit application by requesting a hearing. A commission hearing officer conducts administrative hearings and issues decisions based on the record.

Hearings may also be requested if the Commission's Licensing Section denies requests for emergency transfers or permanent transfers of entry permits. Emergency transfer hearings are held and decided by a paralegal. Permanent transfer hearings are held and decided by a hearing officer.

The Commissioners review each paralegal and hearing officer decision and may order further review and hearings on their own motion or upon the request of an affected party, and may take formal action to modify, reverse or affirm the decisions.

COMMISSION HEARING OFFICERS CONDUCT ADMINISTRATIVE HEARINGS AND ISSUE DECISIONS BASED ON THE RECORD.

A Commission hearing officer also presides over hearings arising from enforcement proceedings, where the Commission may impose fines, revoke or suspend permits of those who attempt to mislead the Commission with false information. These hearings are held in the presence of the Commissioners.

Administrative Proceedings and Decisions

The Adjudications staff issued 50 decisions in 2009. Twelve were issued on permit applications, 30 on permit transfers, 6 on enforcement (fines and notices to show cause) actions, and 2 on miscellaneous matters such as refunds and requests to reopen closed applications. At the end of the year, 20 entry permit application cases were pending before a hearing officer.

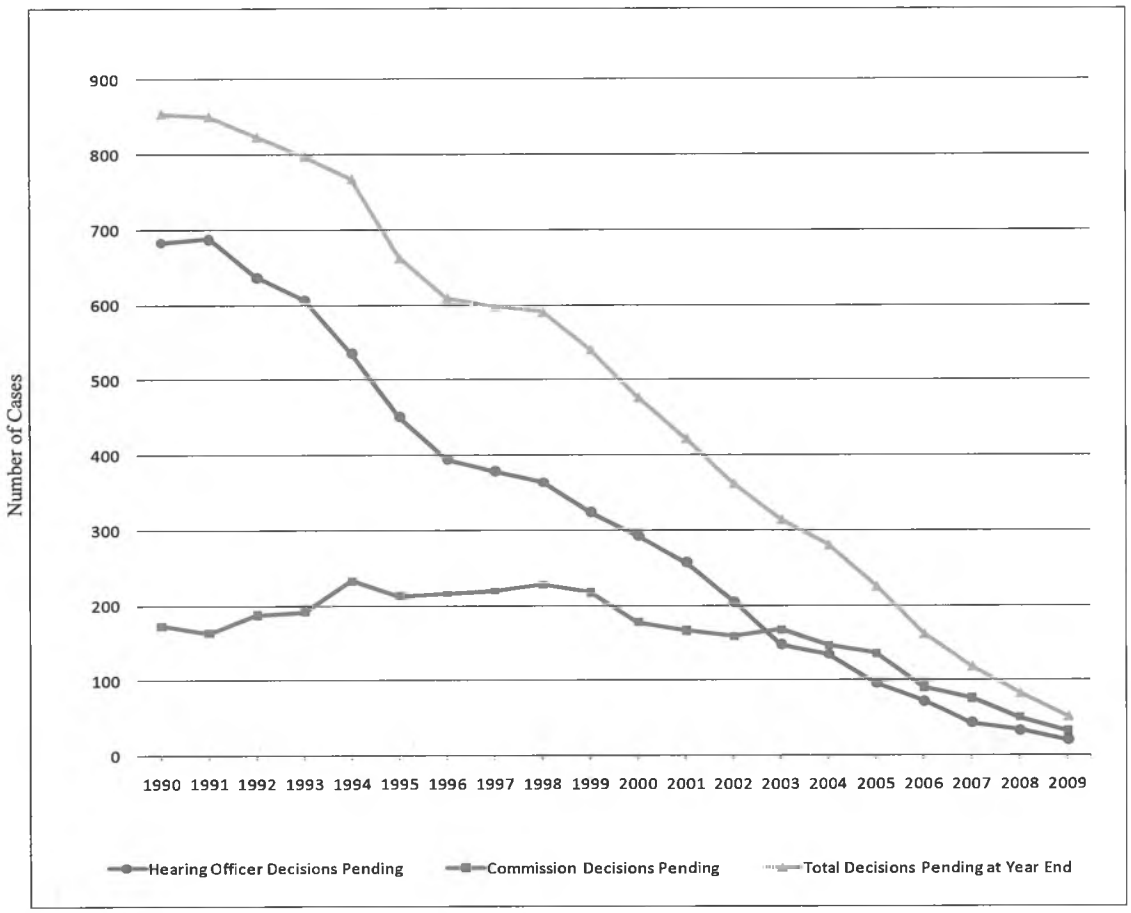
The Commissioners adjudicated a total of 68 cases during 2009. Thirty-three cases were adjudicated on permit applications, 27 on permit transfers, 6 on enforcement actions and 2



on miscellaneous matters. At the end of the year, 32 entry permit applications were pending before the Commissioners.

By the end of 2009, Commissioners and hearing officers made substantial progress through the Commission's adjudication caseload. Looking back to 1990, as the result of the Wassillie settlement (authorizing hundreds of new applications in the salmon fisheries) and a series of Alaska Supreme Court cases during the 1980s, the Commission's caseload had risen to nearly 900 cases. Additionally, since 1990, the Commission has been required by statute to limit 26 additional fisheries generating thousands of new applications for entry permits. From 1990 through 2009, the Commission issued more than 2,100 final decisions, thereby deciding cases at a rate faster than applicants filed new appeals and reducing its caseload to 52.

Commission Progress Through Adjudication Caseload



Information Technology

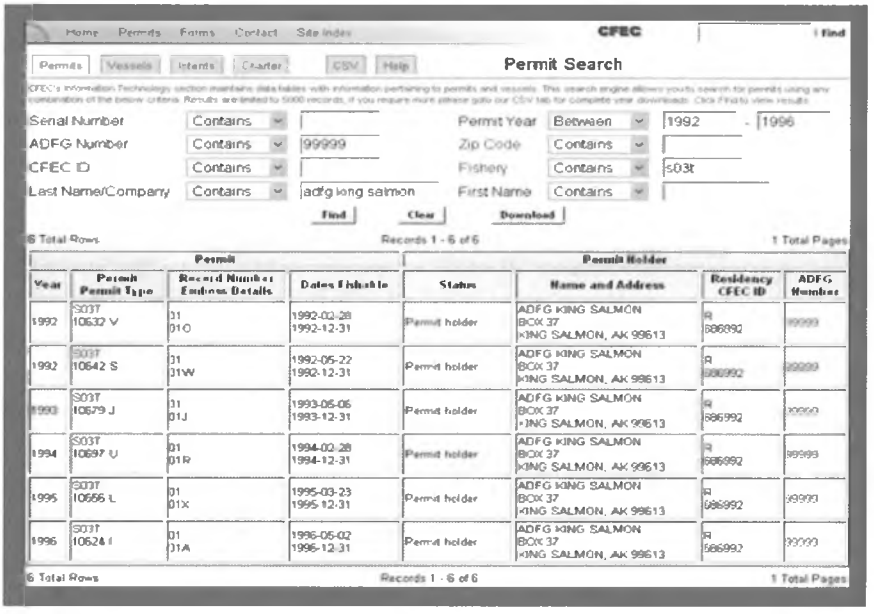
Overview

The Information Technology Section (IT Section) is responsible for all technology infrastructure, including networking and desktop hardware for all internal and external technical support, maintenance, reporting of data and application development. The IT section maintains a small, but responsive staff that must be flexible and capable in several disciplines. Working closely with the Commission, their primary duty is to manage the incoming (data entry software) and outgoing (reports) data integrity, and to ensure reliable and timely access for several private sector and government agencies, as well as the general public.

2009 saw two very important upgrades to the IT infrastructure. An upgraded circuit panel has finally allowed sufficient battery and emergency generator backup for all CFEC vital components. During periods of unstable power, this will allow the system to remain available to the public, and has already done so on a number of occasions. The CFEC network storage shortage has been resolved with a new Storage Area Network unit. With increased speeds, greater backup and administrative capabilities, this upgrade will provide greater flexibility in data management.

The eLandings implementation in groundfish fisheries was completed in 2009. The IT section helped in this effort by designing and implementing the mag stripe on the back of our permit cards which contains all the necessary data for real-time validation during landings. CFEC continues to work closely with the eLandings steering committee and is committed to a productive partnership. Along with the mag stripe, CFEC made layout changes to the permit card, commit-

SAMPLE OF DATA SEARCH



ted to provide bar-code compatibilities and developed and deployed various web-services for more reliable data access.



2009 is the second full year of the web-based permit and vessel renewal applications. The project is very mature with many upgrades offering users greater abilities to renew and manage their inventory. The ability to purchase new permits and license new vessels and greater administrative capabilities are just a few of the many upgrades to a product that continues to evolve and grow.

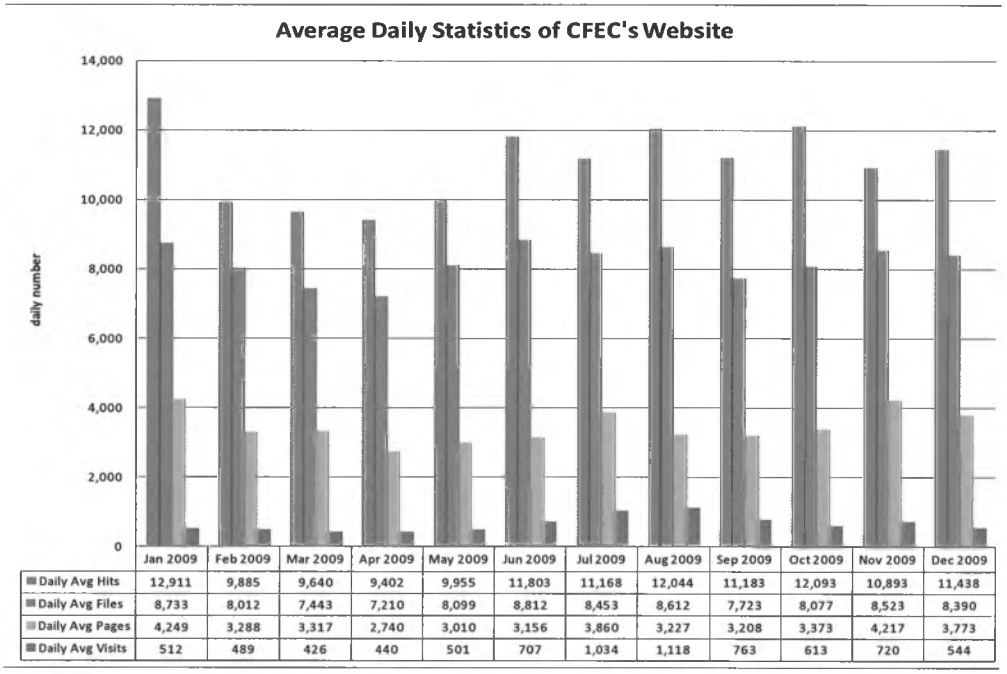
Access to CFEC online permit and vessel database continues to grow, and in 2009 it was the most visited area of our website. The application allows members of the general public to perform ad hoc queries of permit, vessel and intent data, and allows those queries to be downloaded in editable Microsoft Excel files. This service has received tremendous interest and is now a mainstay web offering. A secure version of this site, which provides confidential as well as general information is also available to a number of different agencies who qualify. More functionality has been added to the search criteria this year, offering clients the ability to search by census areas.

The Information Technology Section also maintains the Commercial Fisheries Entry Commission (CFEC) website. The site, located at http://www.cfec.state.ak.us provides many useful links to both fisherman and the general public for information purposes. The data CFEC collects are available to the general public in various non-confidential formats and combinations, located under easy-to-understand headers. Along with the data, CFEC also provides easy download capabilities of all forms and regulations, links to current pertinent public release statements, Commission decisions and judicial appeals, CFEC annual reports and much more. The site is constantly being updated and reviewed for accuracy, and reflects our dedication and commitment to customer response and availability.

Summary by Month

Month	Daily Avg				Monthly Totals					
	Hits	Files	Pages	Visits	Hits	Files	Pages	Visits	KBytes	Sites
Jan 2009	12,911	8,733	4,249	512	333,739	266,294	111,636	14,423	16,693,453	5,810
Feb 2009	9,885	8,012	3,288	489	319,090	225,317	101,935	13,004	17,023,984	6,215
Mar 2009	9,640	7,443	3,317	426	300,148	222,671	94,988	12,261	16,128,324	6,090
Apr 2009	9,402	7,210	2,740	440	307,365	218,810	76,093	12,708	18,123,947	5,881
May 2009	9,955	8,099	3,010	501	302,893	237,677	92,305	15,334	15,289,479	7,144
Jun 2009	11,803	8,812	3,156	707	357,782	247,159	89,944	17,710	15,878,123	10,882
Jul 2009	11,168	8,453	3,860	1,034	377,843	264,113	110,983	24,429	15,713,948	11,270
Aug 2009	12,044	8,612	3,227	1,118	361,229	270,057	109,364	29,503	16,127,458	10,276
Sep 2009	11,183	7,723	3,208	763	353,351	271,384	113,942	24,870	14,827,640	8,885
Oct 2009	12,093	8,077	3,373	613	296,774	241,832	99,371	17,488	12,253,730	7,046
Nov 2009	10,893	8,523	4,217	720	347,893	259,387	125,147	22,176	14,722,284	6,999
Dec 2009	11,438	8,390	3,773	544	332,783	239,081	107,358	15,159	18,305,894	6,487
Totals					3,658,107	2,724,701	1,125,708	203,906	172,782,370	

The following chart is another view of CFEC's average daily website statistics.



Website Statistics Chart Headings

"Hits" represent the total number of requests made to the server during given time period.

"Files" represent the total number of hits that actually resulted in something being sent back to the user. Not all hits will send data, such as 404-Not Found requests and requests for pages that are already in the browser's cache.

> Tip: By looking at the difference between hits and files, you can get a rough indication of repeat visitors, as the greater the difference between the two, the more people are requesting pages they already have cached (have viewed already).

"Sites" is the number of unique IP addresses/hostnames that made requests to the server. Care should be taken when using this metric. Many users can appear to come from a single site, and they can also appear to come from many IP addresses, so it should be used simply as a rough gauge of the number of visitors to the server.

"Visits" occur when a remote site makes a request for a page on the server for the first time. As long as the same site keeps making requests within a given timeout period, they will all be considered part of the same visit. If the site makes a request to the server, and the length of time since the last request is greater than the specified timeout period (default is 30 minutes), a new visit is started and counted, and the sequence repeats. Since only pages will trigger a visit, remote sites that link to graphic and other non-page URLs will not be counted in the visit totals, reducing the number of false visits.

"Pages" are those URLs that would be considered the actual page being requested, and not all of the individual items that make it up (such as graphics and audio clips). Some people call this metric "page views" or "page impressions."

A "KByte" (KB) is 1024 bytes (1 Kilobyte). This measure is used to show the amount of data that was transferred between the server and the remote machine, based on the data found in the server log.



Licensing

Overview

The Licensing Section is responsible for issuance of annual permit and vessel licenses required for participation in Alaska's commercial fisheries. The Section strives to provide commercial fishermen with renewal forms, permits, and vessel licenses in a timely manner to avoid lost fishing time. Additionally, the Licensing Section handles replacement of lost licenses, tracking of vessel ownership changes, salmon net area registrations, and processing of emergency and permanent transfers.

The Licensing Section serves as a source of information for commercial fishermen about laws and regulations affecting the fishing industry. Besides keeping current with licensing requirements and actions of the Commission itself, licensing staff maintains contact with ADF&G, Division of Investments, National Marine Fisheries Service, and other agencies to keep track of changes in relevant laws and regulations. Some of these changes include actions by the Commission and the legislature to bring fisheries under entry limitation or moratoria, to implement new types of licensing mechanisms, to accommodate regulatory changes by the Board of Fisheries, and federal agency actions to restricted access programs such as License Limitation (LLP), Individual Fishing Quota (IFQ), and Community Development Quota (CDQ) programs.

While keeping up with additional licensing responsibilities associated with new regulatory developments, licensing staff must also respond to thousands of information requests annually with current information. The Licensing Section is continually streamlining procedures, automating processing wherever possible, and looking for innovative ways to efficiently meet the ever-increasing informational demands.

Changes in 2009

In November 2008, the online licensing system was launched on the Commission's website. Commission staff renewed 3,485 permits and 1,696 vessels for 2009, through the online system. Online renewal kiosks were set up at Alaska Department of Fish and Game offices in Kodiak, Anchorage and Sitka. Additional kiosks were set up in Alaska Department Fish and Game offices in Cordova, Craig, Ketchikan and Homer.

In addition to the annual base fee, all permit holders must pay to obtain or renew a permit. Nonresidents are required to pay a nonresident surcharge on the first permit renewed or obtained for the year. The surcharge is calculated every three years according to a formula adopted pursuant to the Supreme Court ruling in *Carlson v. State, CFEC*, 919 P.2d 1337 (Alaska 1996) (*Carlson II*), and *State, CFEC v. Carlson*, 65 P.3d 851 (Alaska 2003) (*Carlson III*). The nonresident surcharge for 2007 - 2009 was $105.

Permit Transfers For Fleet Consolidation

In 2002, the Legislature passed HB 286, which allowed holders of salmon permits to hold two permits in a given fishery for the purpose of fleet consolidation but did not allow additional fishing privileges for those holding a second permit. The Commission adopted regulations to implement this new ability to hold two permits in a salmon fishery.

In 2006, the Alaska legislature passed HB 251, which gave the Alaska Board of Fisheries (Board) the legal authority to adopt regulations that would give persons who hold two salmon entry permits for the same fishery additional fishing privileges. In 2008, the Board used this new authority to adopt regulation 5 AAC 18.331(j) which allows a person who holds two Kodiak salmon set gillnet permits to utilize an additional amount of gear. In December 2009, the Board passed a similar regulation for the Bristol Bay salmon set gillnet fishery.

*THE COMMISSION ISSUED **29,213** ANNUAL FISHING PERMITS AND VESSEL LICENSES FOR THE **2009** LICENSE YEAR AND REVIEWED **1,921** PERMIT TRANSFER REQUESTS.*

WWWP1461 **State of Alaska** **2010-06-30 ***

Commercial Fisheries Entry Commission

Number of Salmon Permit Holders Who Hold Multiple Permits in the Same Fishery

Fishery	2002	2003	2004	2005	2006	2007	2008	2009	2010*
S 01A (SOUTHEAST PURSE SEINE)	2	3	4	3	4	5	4	3	5
S 01E (PRINCE WILLIAM SOUND PURSE SEINE)	0	0	1	1	2	4	8	7	8
S 01K (KODIAK PURSE SEINE)	0	0	1	5	5	9	10	10	10
S 01L (CHIGNIK PURSE SEINE)	0	0	0	0	0	0	0	1	0
S 01M (AK PENINSULA PURSE SEINE)	0	0	1	1	2	2	2	1	1
S 03A (SOUTHEAST DRIFT GILLNET)	1	0	2	3	7	5	5	2	3
S 03E (PRINCE WILLIAM SOUND DRIFT GILLNET)	0	1	0	0	1	1	3	2	2
S 03H (COOK INLET DRIFT GILLNET)	1	2	1	0	0	3	1	2	0
S 03M (AK PENINSULA DRIFT GILLNET)	0	3	3	4	3	4	3	1	0
S 03T (BRISTOL BAY DRIFT GILLNET)	5	25	23	27	44	22	18	23	9
S 04D (YAKUTAT SET GILLNET)	0	0	1	0	0	0	0	0	0
S 04H (COOK INLET SET GILLNET)	0	0	0	0	2	4	3	3	4
S 04K (KODIAK SET GILLNET)	0	0	1	1	1	1	25	34	37
S 04M (AK PENINSULA SET GILLNET)	0	1	0	0	0	0	0	0	0
S 04T (BRISTOL BAY SET GILLNET)	0	2	0	0	0	2	3	3	41
S 04Y (LOWER YUKON GILLNET)	0	0	0	0	0	0	1	1	1
S 05B (STATEWIDE HAND TROLL)	0	0	0	0	0	1	0	0	0
S 08P (UPPER YUKON FISH WHEEL)	0	0	0	0	1	1	1	1	2

(1) Current year data may change as permits are transferred.
(2) Past years' data are based on end of year information.
(3) Only permanent permits are included in this report.
* 2010 data only through 6/30/2010



The number of persons holding two permits in the Kodiak salmon set gillnet fishery increased in 2009. This regulation will sunset December 31, 2010 unless additional action is taken by the Board. At the end of 2009, 94 fishermen held two permits for the same salmon fishery in 15 different salmon fisheries. Twenty-six percent of these fishermen (34 of 94) held two permits for the Kodiak salmon set gillnet fishery where the second permit allows the use of additional gear.

Demerit Points

In 1998, the Alaska Legislature enacted AS 16.43.850-16.43.895, which established a demerit point system for suspending commercial fishing privileges based on convictions for fishing violations in the salmon fisheries. Under this law, the Commission must suspend a salmon permit holder's commercial fishing privileges for a period of one to three years if certain threshold levels of demerit points are accumulated in a three-year period.

Between 1998 and 2009, the Commission has issued demerit points to 977 fishermen. Two Bristol Bay salmon drift gillnet permits have been suspended - one in 1999 and one in 2007 and two Kuskokwim salmon gillnet permits have been suspended; both in 2009. The majority of the demerit points assessed have been for violations occurring in the Bristol Bay salmon drift gillnet fishery.

Vessel Entry Permits

In 2002, Alaska's Legislature authorized vessel limited entry programs for the Bering Sea hair crab and weathervane scallop fisheries. Staff issued the first vessel entry permits in 2005. To date, 21 vessel entry permits have been granted. In 2008, the legislature amended the sunset date for these vessel entry permit programs to expire the end of 2013, unless reauthorized by the legislature.



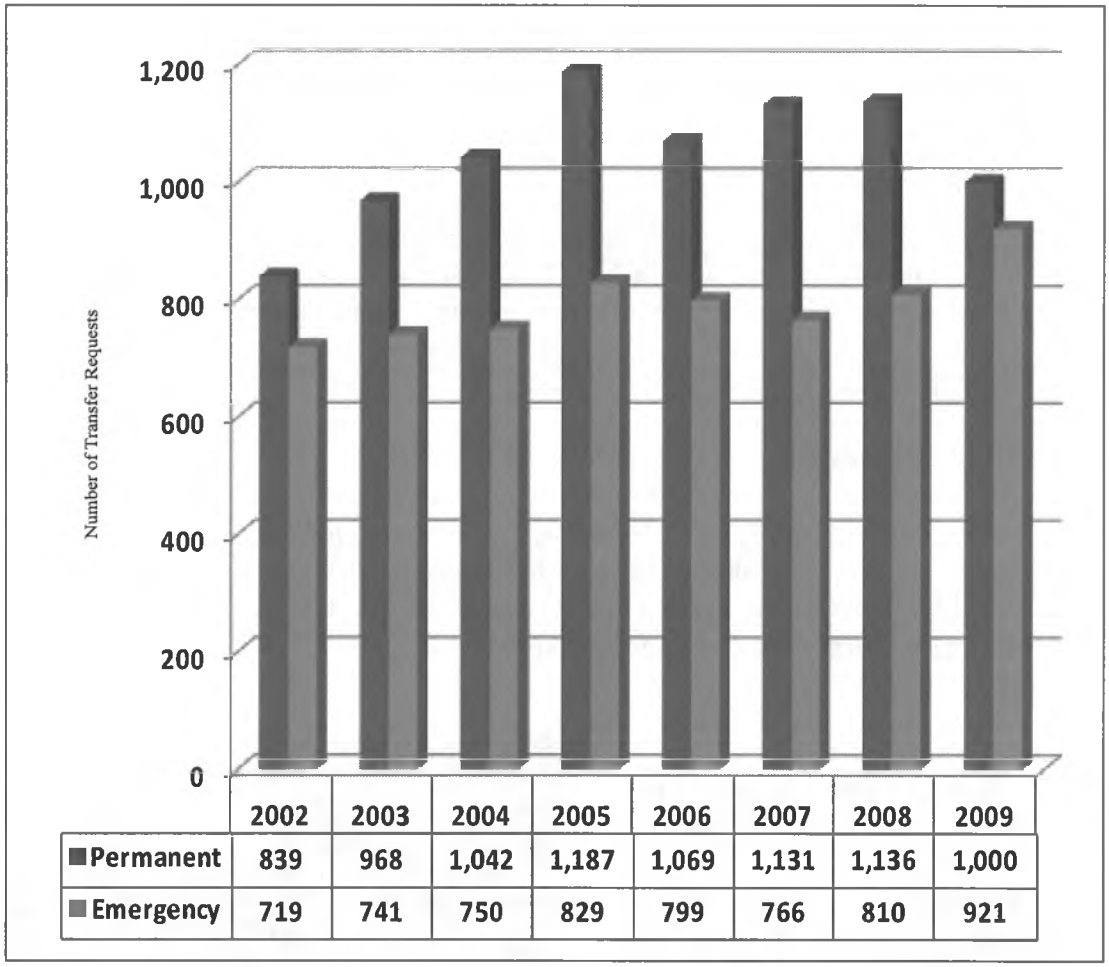


Photos Courtesy of the Alaska Seafood Marketing Institute

Permit Transfer Requests

During 2009, the Commission reviewed 1,921 requests for permanent and emergency transfers of permits. These included 921 emergency transfer requests and 1,000 permanent transfer requests. A breakdown of transfer requests over the last 8 years by type of transfer is shown in the graph below.

Permanent and Emergency Permit Transfer Requests Reviewed



	2002	2003	2004	2005	2006	2007	2008	2009
Permanent	839	968	1,042	1,187	1,069	1,131	1,136	1,000
Emergency	719	741	750	829	799	766	810	921

(From CFEC reports B1420P-A and B1425P-C, E, J)

Permanent Transfer Requests in 2009

Standard transfers approved.....941
Survivorship transfers to spouse approved 19
Foreclosure transfers by loan agencies approved 3
Total approved..... 963

Transfers denied.....22
Withdrawn transfer requests 15
Total reviewed..... 1,000

Emergency Transfer Requests in 2009

Emergency transfer requests approved 866
Emergency transfer requests denied 53
Emergency transfer requests withdrawn.....2
Total Reviewed 921

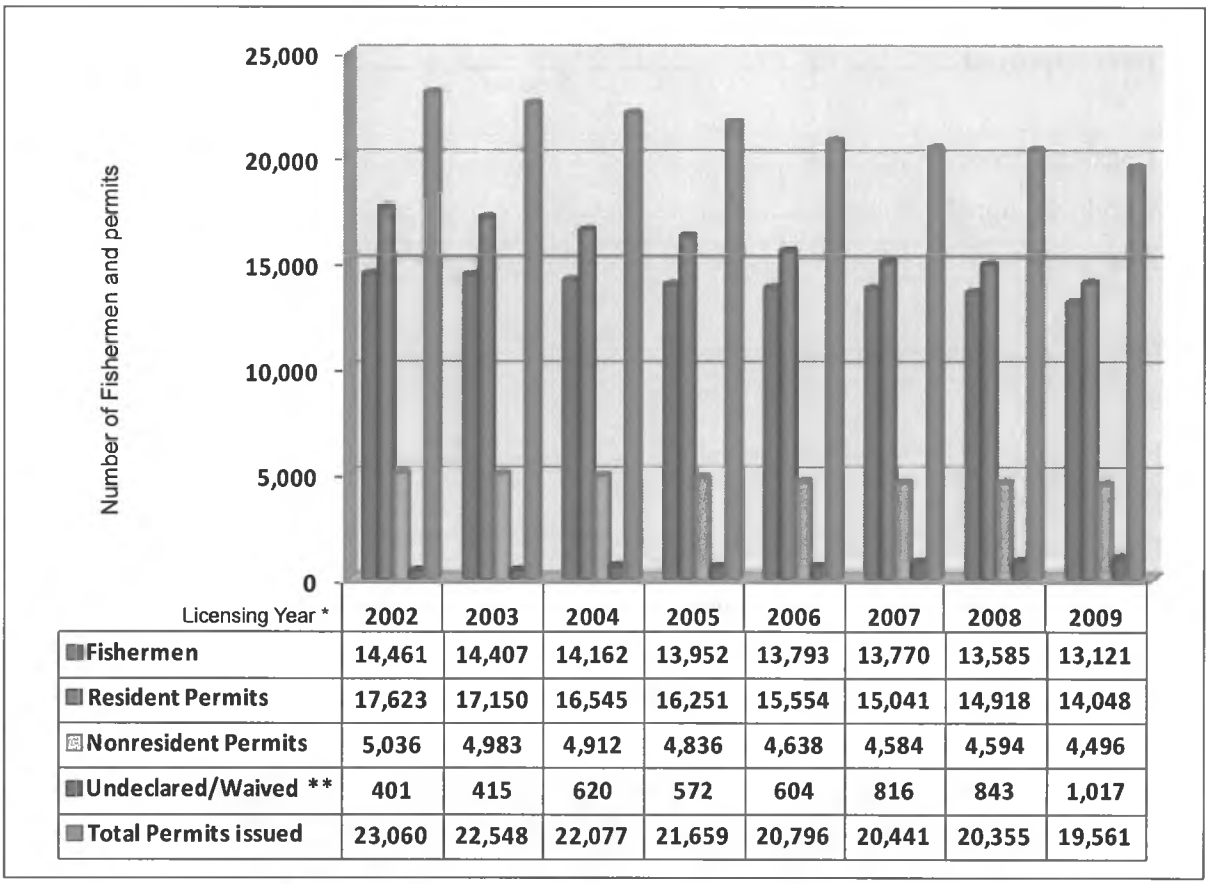
Total Transfer Requests Reviewed in 2009 1,921



Photo Courtesy of the Alaska Seafood Marketing Institute (ASMI)

Permits and Licenses Issued

The following graphs provide data on permits and vessel licenses by year:



Licensing Year *	2002	2003	2004	2005	2006	2007	2008	2009
Fishermen	14,461	14,407	14,162	13,952	13,793	13,770	13,585	13,121
Resident Permits	17,623	17,150	16,545	16,251	15,554	15,041	14,918	14,048
Nonresident Permits	5,036	4,983	4,912	4,836	4,638	4,584	4,594	4,496
Undeclared/Waived **	401	415	620	572	604	816	843	1,017
Total Permits issued	23,060	22,548	22,077	21,659	20,796	20,441	20,355	19,561

(From CFEC report B1440P-C. Includes Interim-Use, Interim-Entry ***, Entry and Vessel Entry Permits)

The numbers of permits in this table are preliminary and may increase further due to late renewals of entry permits. Numbers of permits are higher than number of fishermen, as some individuals hold permits in more than one fishery. Annual renewal fees for entry permits must be paid unless waived by the Commission. Failure to renew an entry permit for a period of two years from the year of last renewal can result in forfeiture of the entry permit. Prior data has been updated.

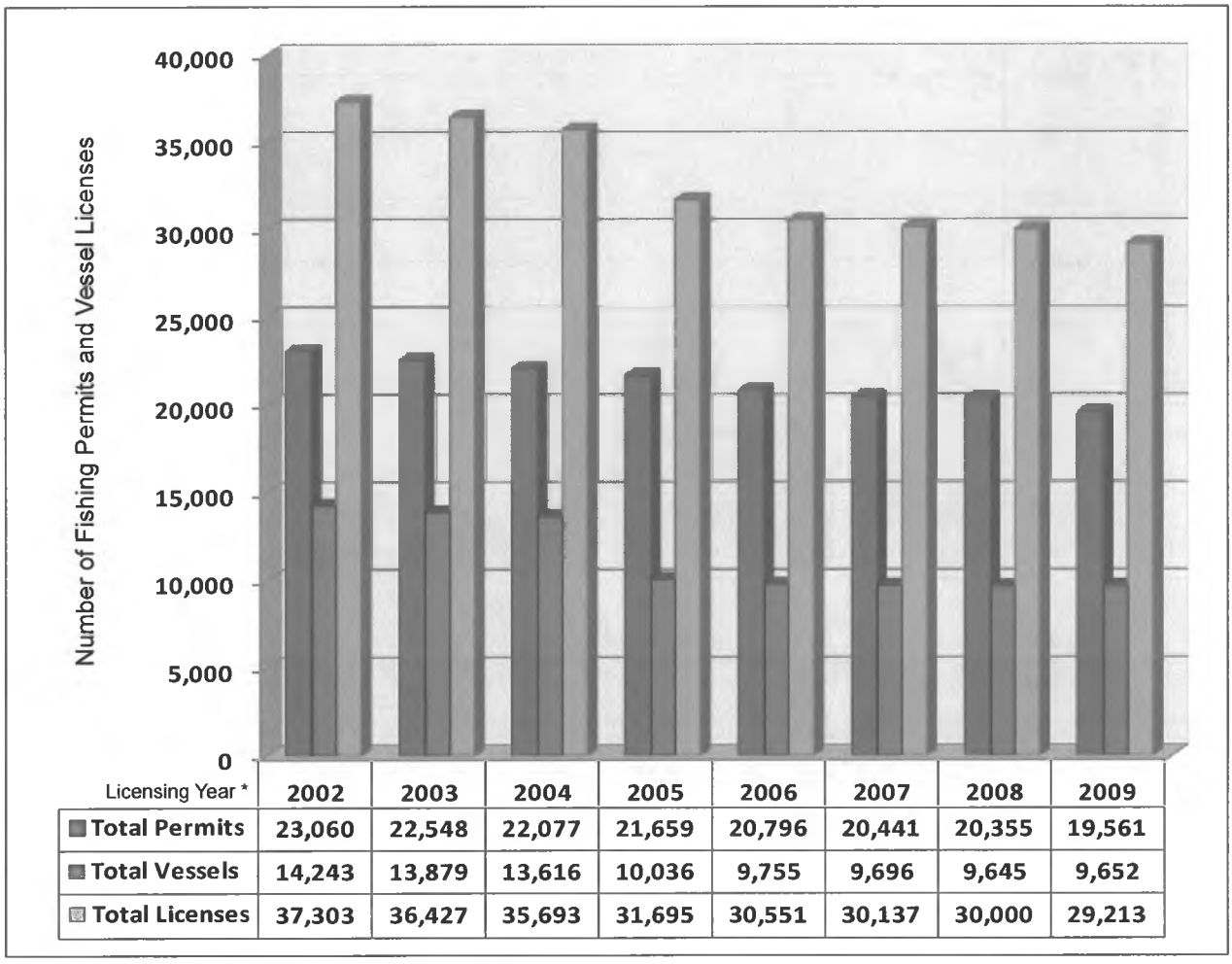
* License year refers to the fishing year for which the license or permit is issued, regardless of when fees were paid. Resident / non-resident status is determined by the type of permit fees that were paid by the permit holder.

Data include permits issued in both open access fisheries and limited fisheries where fees were paid or waived by 7/2/2010.

** Number of permits for which the Commission waived fees due to administrative closure of a fishery for the entire season.

*** "Interim-Entry" permit refers to an Interim-Use permit issued to an applicant for a permanent limited entry permit in a limited fishery.

Fishing Permits and Vessel Licenses Issued by License Year



Licensing Year *	2002	2003	2004	2005	2006	2007	2008	2009
Total Permits	23,060	22,548	22,077	21,659	20,796	20,441	20,355	19,561
Total Vessels	14,243	13,879	13,616	10,036	9,755	9,696	9,645	9,652
Total Licenses	37,303	36,427	35,693	31,695	30,551	30,137	30,000	29,213

(From CFEC report B1440P-C. Includes Interim-Use, Interim-Entry **, Entry and Vessel Entry Permits)

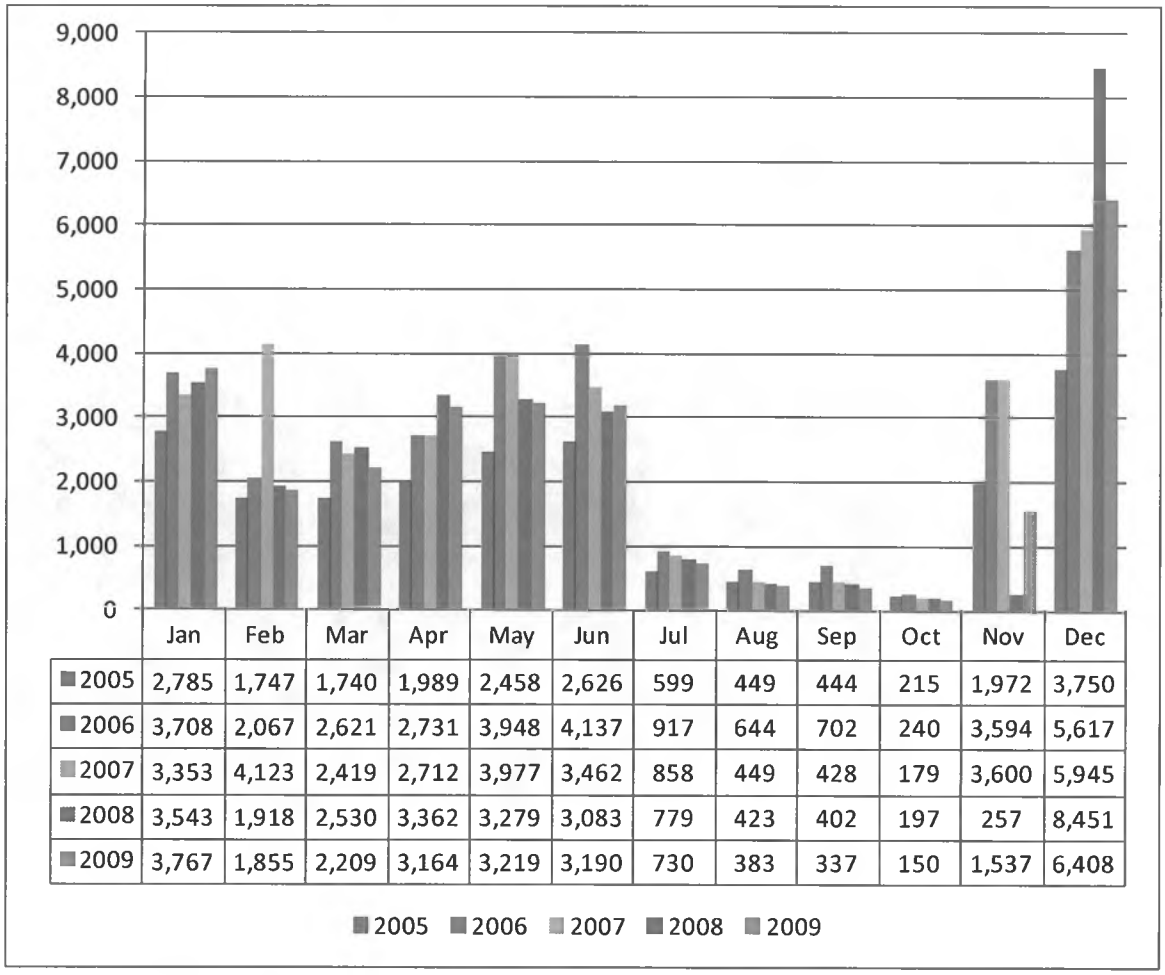
The numbers of permits in this table are preliminary and may increase further due to late renewals of entry permits. Numbers of permits are higher than number of fishermen, as some individuals hold permits in more than one fishery. Annual renewal fees for entry permits must be paid unless waived by the Commission. Failure to renew an entry permit for a period of two years from the year of last renewal can result in forfeiture of the entry permit. Prior data has been updated.

* License year refers to the fishing year for which the license or permit is issued, regardless of when fees were paid. Resident / non-resident status is determined by the type of permit fees that were paid by the permit holder.

Data include permits issued in both open access fisheries and limited fisheries where fees were paid or waived by 7/2/2010.

** "Interim-Entry" permit refers to an Interim-Use Permit issued to an applicant for a permanent limited entry permit in a limited fishery.

Permit and Vessel Licenses Issued by Month



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2005	2,785	1,747	1,740	1,989	2,458	2,626	599	449	444	215	1,972	3,750
2006	3,708	2,067	2,621	2,731	3,948	4,137	917	644	702	240	3,594	5,617
2007	3,353	4,123	2,419	2,712	3,977	3,462	858	449	428	179	3,600	5,945
2008	3,543	1,918	2,530	3,362	3,279	3,083	779	423	402	197	257	8,451
2009	3,767	1,855	2,209	3,164	3,219	3,190	730	383	337	150	1,537	6,408

(From CFEC reports B1430P-A and B2430P-A)



Photos courtesy of the Alaska Seafood Marketing Institute (ASMI)

Summary of Permitting Activity - 2009 Licensing Year

Limited Entry Permits Renewed	12,654
Limited Entry Permits Not Renewed by end of 2009	923
Limited Entry Permits With Fees Waived *	1,004
Limited Entry Permits Revoked or Lapsed (since 1975)	2,073
Interim-Use Permits Issued in Fisheries Under Limitation **	91
Interim-Use Permits Issued in Open-to-Entry Fisheries	5,762
Special Harvest Area (Hatchery) Permits Issued	20
Educational Entry Permits Issued	1
Mariculture Permits Issued	12
Vessel Entry Permits Renewed	4
Vessel Permits Not Renewed by end of 2009	3
Vessel Permits with Fees Waived*	13
Vessel Permits Revoked or Lapsed	1

(From CFEC reports B1440P-A and B)

* Fees for limited entry permits may be waived in the event of season-long closures.

** Sometimes referred to as Interim Entry Permits





Vessel Statistics

FEE CATEGORY BASED ON OVERALL LENGTH OF VESSEL	LICENSING FEE	NUMBER OF VESSELS LICENSED
Vessels to 25'	$24.00	3,136
Over 25' to 50'	$60.00	5,232
Over 50' to 75'	$120.00	784
Over 75' to 100'	$225.00	193
Over 100' to 125'	$300.00	158
Over 125' to 150'	$375.00	52
Over 150' to 175'	$450.00	34
Over 175' to 200'	$525.00	24
Over 200' to 225'	$600.00	8
Over 225' to 250'	$675.00	5
Over 250' to 275'	$750.00	7
Over 275' to 300'	$825.00	4
Over 300'	$900.00	15
Totals		**9,652**

Data as of 5/24/2010





Photos courtesy of the Alaska Seafood Marketing Institute (ASMI)

Brochures and Forms

The brochures shown below are on our website in PDF format. To view or download, go to http://www.cfec.state.ak.us/Publications/brochures.htm.



Applications and other forms can also be downloaded from our website at http://www.cfec.state.ak.us/mnu_Forms.htm





Please note: You must have Adobe Reader installed on your computer to view our brochures, applications and other forms. The Adobe reader software is available as a free download at http://www.adobe.com/products/acrobat/readstep2.html

Research

Overview

The Research Section provides the fishery limitation studies and economic analyses needed by the Commission. Working with the IT section, the Research Section also produces basic economic data on Alaska's fisheries. The Research Section issues both standard and specialized research reports. The Commission's studies, analyses, data and research reports have been used to help inform a wide range of fishery issues.

In 2009, the Commission's Research staff was involved in many projects. These projects included efforts to monitor trends in Alaska's fisheries, to evaluate the need for access controls in particular fisheries, and to provide other agencies and users with needed data and analyses.

The following paragraphs provide some highlights of 2009 Research activities.

Monitoring Fisheries

The Research staff analyzed and evaluated several state-managed unlimited fisheries and produced internal confidential briefing reports. Other unlimited fisheries were monitored through standard statistical reports. However, the Commission did not propose any new limited entry programs in 2009.

Fleet Consolidation and Salmon Restructuring

The Commission adopted an optimum number range for the Bristol Bay salmon drift gillnet fishery in 2005, and is continuing to consider how best to promote a reduction in the number of units of gear in the fishery to a more optimal level. The Commission did not make any new optimum number proposals during 2009. The issue of fleet consolidation remains controversial and problematic.

In 2006, the Alaska legislature passed HB 251 which gives the Alaska Board of Fisheries (Board) the legal authority to adopt regulations that would give individuals who hold two salmon entry permits for the same fishery additional fishing privileges. The bill provides a new mechanism for creating incentives to promote fleet consolidation in order to improve economic returns in the salmon fisheries.

In 2008, the Board used this new authority to adopt regulation 5 AAC 18.331(j) which allows a person who holds two Kodiak salmon set gillnet permits to utilize an additional amount of gear. This regulation has been in effect for the 2008 and 2009 seasons and several persons have taken advantage of it. The regulation will expire on December 31, 2010 unless extended by Board action.



Southeast Alaska Salmon Purse Seine Fleet Consolidation

In 2008, the Southeast Revitalization Association (SRA) conducted a permit buy-back program in the Southeast Alaska salmon purse seine fishery which resulted in the purchase and relinquishment of 35 entry permits to the Commission. The SRA is a qualified salmon fishery association formed under the authority of AS 16.40.250 for the purpose of fleet consolidation. The SRA buy-back program was federally financed using appropriations from the Pacific Coast Salmon Recovery Fund. The buy-back was conducted using a reverse auction system to achieve the greatest reductions in permits with the available funding of $2,872,746. The SRA is currently pursuing federal loan financing for an additional buy-back program.

THE COMMISSION IS OPEN TO ANY PROPOSAL THAT WOULD LEAD TO IMPROVEMENTS FOR ALASKA SALMON FISHERMEN AND THEIR FAMILIES.

The Commission worked with the SRA to help facilitate the fleet reduction process. The Commission remains committed to help fishing groups, the public, the Alaska Board of Fisheries, and other policy makers explore salmon restructuring options and issues. The Commission is open to considering any proposal that would lead to improvements for Alaska salmon fishermen and their families. Nevertheless, the viability of different alternatives for industry restructuring may ultimately depend upon a satisfactory resolution of some of the issues raised by the Alaska Supreme Court in *Johns v. State, CFEC*, 758 P.2d 1256 (1988), and *Grunert v. State,* 109 P.3d 924 (Alaska 2005), which alert the Commission to the risk that a fishery can become too exclusive under the Alaska Constitution.

Other Projects and Reports

The Research staff produced monthly permit value estimates for the Department of Commerce, Community and Economic Development and other users. The staff also produced a number of specialized reports to service sundry requests from researchers, consultants, user groups, other agencies, and other entities. At the request of the Commissioner of Fish and Game, the staff provided data reports to the Alaska Board of Fisheries to help inform their deliberations on several regulatory proposals for the Bristol Bay salmon drift gillnet fishery.

The following is a listing of some 2009 public reports:

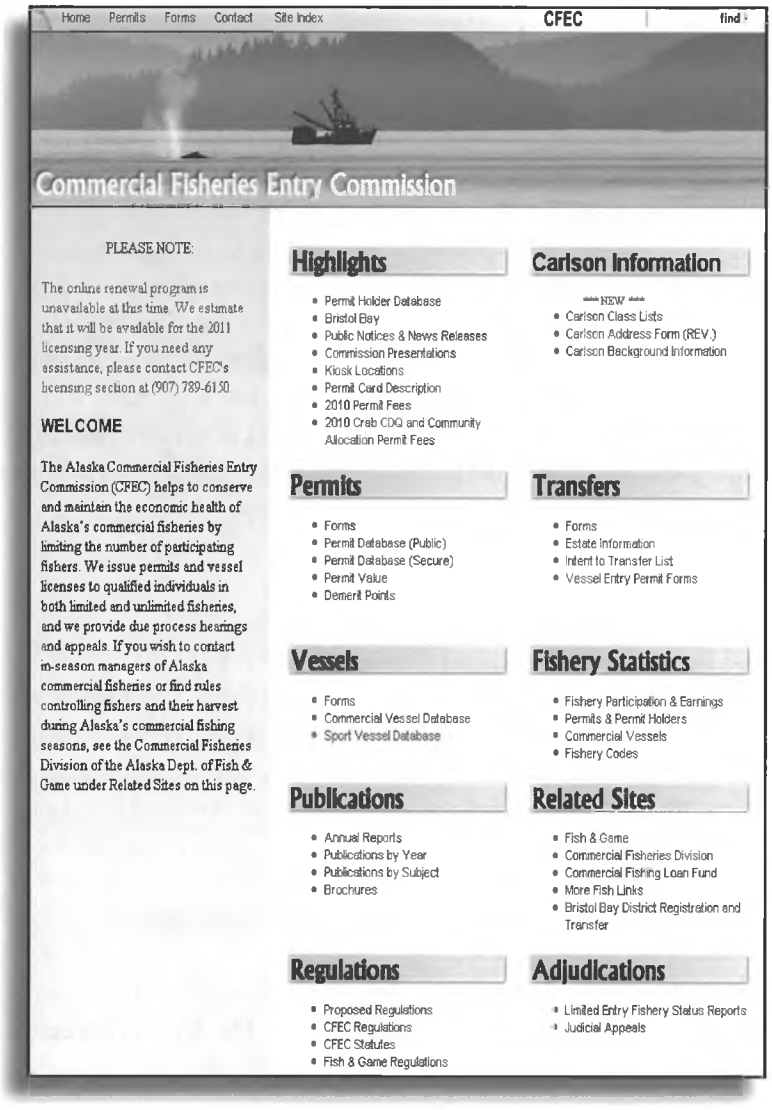
CFEC Permit Holdings, Harvests, and Estimated Gross Earnings by Resident Type in the Bristol Bay Salmon Gillnet Fisheries (09-1N) by Kurt Iverson

Changes in the Distribution of Alaska's Commercial Fisheries Entry Permits, 1975-2008 (09-4N) by Justine Sears, Cathy Tide, and Nancy Free-Sloan.

Executive Summary - Changes in the Distribution of Alaska's Commercial Fisheries Entry Permits, 1975-2008 (09-4N-EXEC) by Nancy Free-Sloan, Cathy Tide, Justine Sears, and Kurt Iverson.

Bristol Bay Salmon Drift Gillnet Two-Permit Operations: Preliminary Estimates from 2009 District Registration Data (09-6N) by Kurt Schelle, Nancy Free-Sloan, and Craig Farrington

These reports are available on the CFEC web site (http://www.cfec.state.ak.us) or, upon request, from the Commercial Fisheries Entry Commission, Research Section, 8800 Glacier Highway #109, P.O. Box 110302, Juneau, AK 99811-0302.



Revenue

Overview

Revenues generated by the Commission come primarily from issuance of commercial fishing permits and vessel licenses. Additional revenues originate from research and data processing services and reports requested by the public, fishing organizations, fisheries research groups, and other agencies. Total revenue for fiscal year 2009 (July 1, 2008 – June 30, 2009) was approximately $6.1 million.

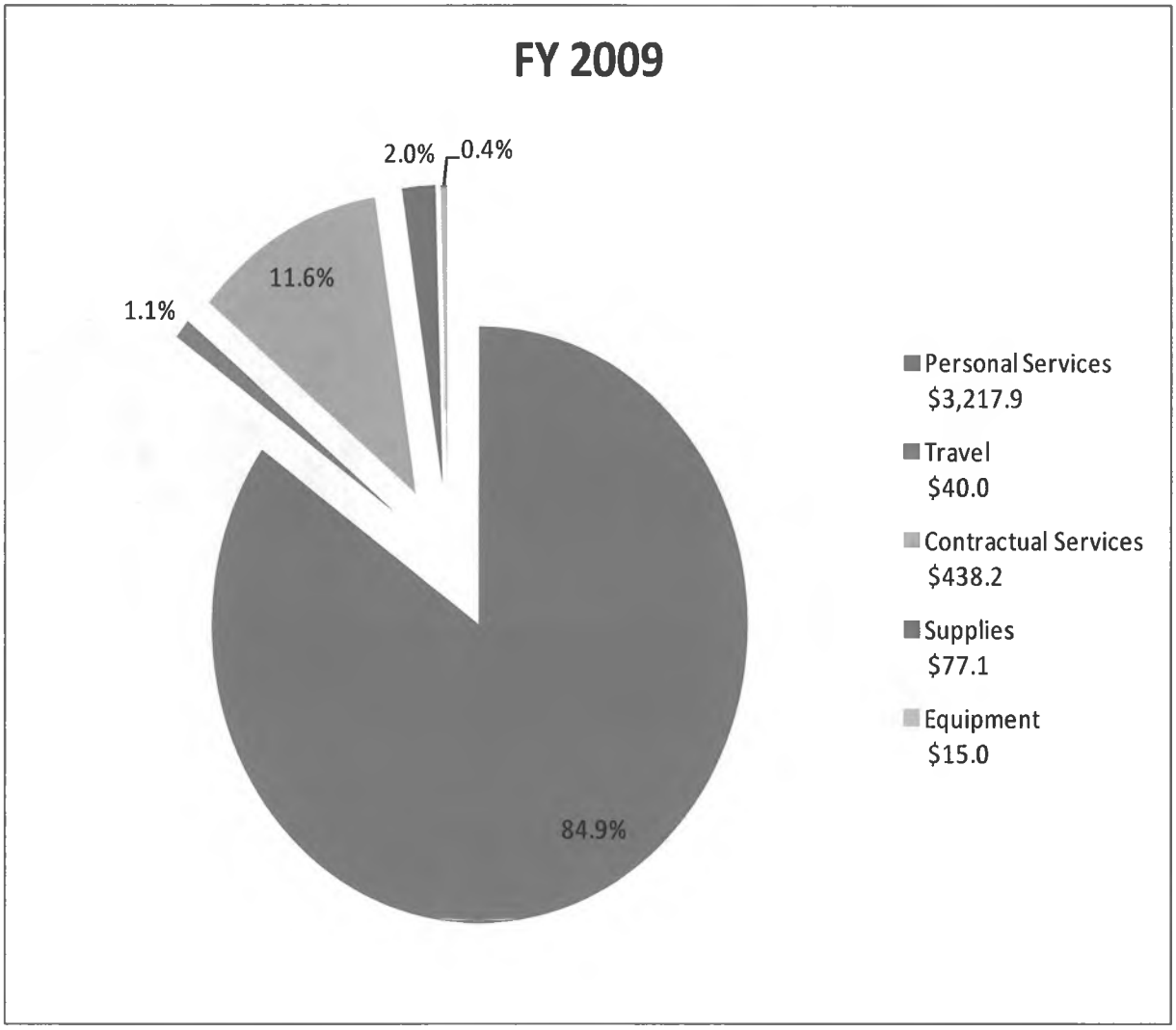
Senate Bill 93, which passed the legislature during the 2005 session made two significant changes that increased CFEC revenues beginning with the 2006 commercial fisheries licensing year (calendar year). The first was to raise the cap on annual fishing permit renewals from $300 to $3,000. This mainly affected those higher value fisheries that benefited in the past from the lower cap. The statute calls for fees to reflect the economic return from different fisheries. The second was a modification to the annual commercial fishing vessel license fee. The fee structure was expanded from 5 fee classes to 13 fee classes at 25-foot increments.

*Approximately **$2.3** million dollars of **CFEC's FY2009** revenue was used to contribute to Fishermen's Fund and programs within the Department of Fish and Game that support Alaska's commercial fisheries.*

Following the effective date of SB 93, the Commission proposed regulations, held a public comment period including several public hearings, and received oral and written testimony. In response to public comments, the Commission adopted an annual permit renewal schedule to accommodate a phased-in approach. The Commission capped the permit renewal fee for the 2006 licensing year at $1,050, for 2007 at $2,025, and for 2008 and on at $3,000.

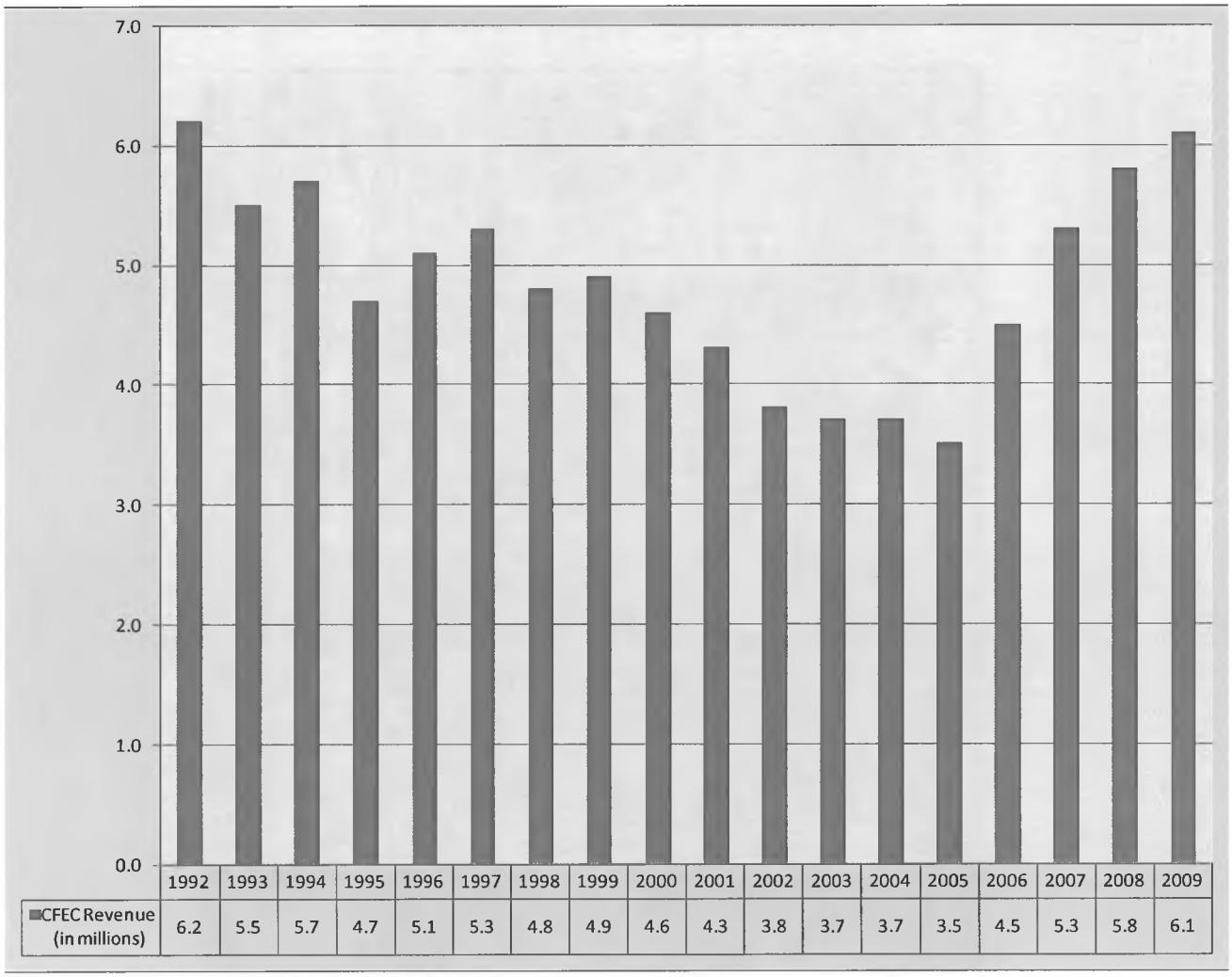
Under 20 AAC 05.245, the permit renewal fees are based on a formula of 4/10ths of 1% of the estimated market value of the permit for limited fisheries and 4/10ths of 1% of the estimated average gross earnings for unlimited fisheries. The permit value represents the marketplace value of a limited entry permit. The phased-in approach only affected high-value fisheries. Permit renewal fee classes ranged from $75 to $3,000 for 2009, with the majority being $375 or less. The fee increase impacted fishermen who would have paid higher fees in the past, if not for the previous fee cap.

In fiscal year 2009, CFEC's revenue was used to fund the Commission's authorized budget of $3,788,200 (see chart on next page).



Approximately $2.3 million dollars of CFEC's FY2009 revenue was used to contribute to Fishermen's Fund and programs within the Department of Fish and Game that support Alaska's commercial fisheries.

Revenue Generated by the Commission by Fiscal Year *



	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CFEC Revenue (in millions)	6.2	5.5	5.7	4.7	5.1	5.3	4.8	4.9	4.6	4.3	3.8	3.7	3.7	3.5	4.5	5.3	5.8	6.1

Note: These data reflect permit fees, vessel license fees, limited entry application fees, refunds and miscellaneous revenue.
* Revised from earlier Annual Reports

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Decisions and Activities, Calendar Years 2000 - 2008..... 32



Employee Names and Electronic Mail Addresses

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Beccy Charles	Executive Secretary	beccy.charles@alaska.gov
Susan Haymes	Law Specialist II	susan.haymes@alaska.gov
Sheri Paddock	Administrative Clerk	sheri.paddock@alaska.gov
Shirley Penrose	Administrative Officer	shirley.penrose@alaska.gov
Doug Rickey	Commission Decision Drafter	doug.rickey@alaska.gov

ADJUDICATIONS

Frank Glass	Adjudications Project Leader	frank.glass@alaska.gov
Jim Bowen	Hearing Officer II	**
Dorothy Frary	Managing Paralegal	**
Sherri Wolfe	Paralegal II	sherri.wolfe@alaska.gov

INFORMATION TECHNOLOGY SERVICES

Ty McMichael	Info. Technology Services Leader	ty.mcmichael@alaska.gov
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Don Huntsman	Analyst Programmer V	don.huntsman@alaska.gov
Joe Kollar	Analyst Programmer II	joe.kollar@alaska.gov
Brant Oliphant	Analyst Programmer III	brant.oliphant@alaska.gov
Adrienne Scott	Data Systems Technician	**

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Constance Jeffers	Comm. Fish Permit Clerk II	connie.jeffers@alaska.gov
Melehoko Maake	Comm. Fish Permit Clerk V	mele.maake@alaska.gov
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Ray Skan	Comm. Fish Permit Clerk III	**
Marissa Teske	Comm. Fish Permit Clerk III	rissa.teske@alaska.gov
Jill Wood	Comm. Fish Permit Clerk IV	jill.wood@alaska.gov

RESEARCH

Kurt Schelle	Research/Planning Project Leader	kurt.schelle@alaska.gov
Craig Farrington	Research Analyst III	craig.farrington@alaska.gov
Nancy Free-Sloan	Research Analyst III	nancy.free-sloan@alaska.gov
Kurt Iverson	Fisheries Analyst	kurt.iverson@alaska.gov
Justine Sears	Research Analyst II	**
Cathy Tide	Research Analyst III	cathy.tide@alaska.gov

** These people are no longer employed at the Commission as of 12/31/09.

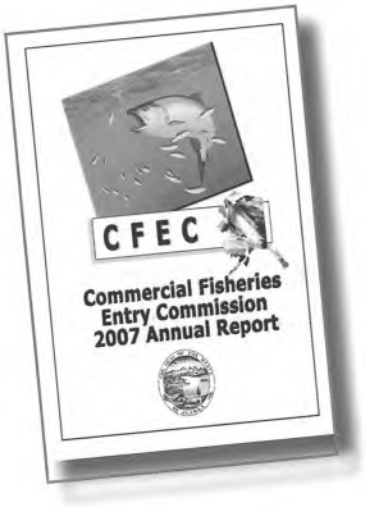
Decisions and Activities in Prior Years



Calendar Year 2008

- Extended the sunset date for limitation of the Statewide Weathervane Scallop and Bering Sea Hair Crab fisheries to 2013.
- Participated as a member of the Alaska Department of Fish & Game, Sport Fish Division's Sport Fish Guide Task Force.
- Launched the new online permit and vessel license renewal service, and established online renewal kiosks in Anchorage, Sitka, and Kodiak.
- Presented a report on the status of the of permit applications for at the Alaska Department of Fish & Game's Northern Southeast Inside sablefish longline fishery Industry Meeting.
- Met with representatives of Alaska congressional delegation and the State of Alaska office in Washington, D.C., to discuss federal legislation affecting Alaska's commercial fisheries.
- Attended an Alaska Board of Fisheries meeting in Anchorage addressing ecotourism issues.
- Participated in Alaska Board of Fisheries Restructuring Committee meeting in Anchorage to address restructuring proposals affecting commercial salmon fisheries.
- Appeared before the Joint Cook Inlet Salmon Task force to report on buy-back of limited entry permits under the Limited Entry Act.
- Presented "Commercial Fishing: Overview of the Industry" at the 2008 Southeast Alaska Native Summit in Juneau.





Calendar Year 2007

- Participated in meetings with ADF&G, Sport Fish Division's Sport Fish Guide Task Force to discuss issues regarding limited entry and the sport fish guide industry.
- Continued to work with the Southeast Revitalization Association (SRA) to structure a fleet consolidation plan for the Southeast Alaska purse seine salmon fishery.
- Presented "State Limited Entry" at the Alaska's Young Fishermen's Summit: Weaving a Network of Future Fishing Leaders.
- Adopted regulations implementing the Application for Immediate Fishing.
- Met with representatives of the Congressional delegation to discuss federal legislation affecting Alaska's commercial fisheries.
- Reported to the Southeast Alaska King and Tanner Crab Task Force on the status of commission adjudications for those fisheries.
- Participated on an advisory panel to a study commissioned by the Bristol Bay Economic Development Corporation to explore ways to increase the number of limited entry permits held by local Bristol Bay residents.
- Continued to maintain a professional relationship with the IRS to help Alaska fishers protect their fishing privileges.
- With the Alaska Attorney General, we continued to defend the state against elimination of nonresident fee differential in the *Carlson* case.

CALENDAR YEAR 2006

- Launched new web site which includes a searchable permit holder database, information on permit renewals and transfers, and links to standard data tables and Commission reports.

- Presented "30 Years of Limited Entry" at the NOAA National Marine Fisheries Service sponsored conference, *Alaska's Fishing Communities: Harvesting the Future*, in Anchorage, Alaska.

- Participated in a meeting with the Alaska Department of Fish and Game Sport Fish Division and sport charter guides to discuss issues regarding limited entry and the sport fish guide industry.

- HB 484 (Chapter 91 SLA 2006) authorized the legislature to appropriate revenue from the sale (re-issuance) of entry permits by the state in order to reimburse a qualified Salmon Association for its expenses in retiring permits under a buyback program.

- HB 251 (Chapter 11 SLA 2006) authorized the Board of Fisheries to adopt regulations allowing a person who holds two limited entry permits for a single salmon fishery to obtain greater fishing privileges such as additional gear.

- Continued to maintain a professional relationship with the IRS to help Alaska fishers protect their fishing privileges.

- With the Alaska Attorney General, we continued to defend the state nonresident fee differential in the *Carlson* case.



Photo Courtesy of the Alaska Seafood Marketing Institute (ASMI)



Photo Courtesy of the Alaska Seafood Marketing Institute (ASMI)

CALENDAR YEAR 2005

- Adopted an optimum number range of 900 to 1,400 permits for the Bristol Bay drift gillnet fishery.
- Provided testimony and data for SB 93, an act relating to commercial fishing permits and vessel license fees.
- Proposed and adopted regulations implementing SB 93, which raised the maximum allowable base fee ("fee cap") for an annual permit renewal from $300 to $3,000.
- Continued to work with the Alaska Board of Fisheries, the Department of Fish and Game, and other interested persons and groups to explore options for groundfish fisheries in state waters.
- Participated in a discussion of groundfish issues in Kodiak.
- Participated in a panel discussion dealing with salmon consolidation at the Pacific Fish Expo in Seattle.
- Continued to maintain a professional relationship with the IRS to help Alaska fishers protect their fishing privileges.
- With the Alaska Attorney General, we continued to defend the state against elimination of nonresident fee differential in the *Carlson* case.
- Provided testimony and data for HB 251 authorizing the Board of Fisheries to adopt regulations regarding fishing by a person who holds two entry permits for a salmon fishery.

CALENDAR YEAR 2004

- Conducted research, held public hearings, and adopted regulations limiting entry into the statewide weathervane scallop fishery under a vessel-based system. Conducted an application period and received 10 applications. Completed adjudication of 9 applications and issued 8 permanent vessel entry permits.

- Conducted a limited entry application period for the Bering Sea hair crab fishery and received 20 applications. Completed adjudication of 14 applications and issued 12 permanent vessel entry permits.

- Conducted a limited entry application period for the Kodiak *bairdi* Tanner pot crab fishery and received 233 applications. Completed adjudication of 205 applications and issued 136 permanent entry permits.

- Completed The Bristol Bay Salmon Drift Gillnet Optimum Number Report. Proposed an optimum number of entry permits for the Bristol Bay drift gillnet fishery and held public hearings.

- Participated in the meetings of the Joint Legislative Salmon Industry Task Force and the Alaska Board of Fisheries' Salmon Industry Task Force.

- Addressed the Kenai Working Group on limited entry issues.

- Addressed the Southeast Inter-Tribal Fish and Wildlife Conference on Commercial and Subsistence Fisheries on limited entry issues.

- Addressed the Bristol Bay Native Corporation's Leadership Conference on the optimum number proposal for the Bristol Bay drift gillnet fishery.

- Participated in a discussion of the proposed Bristol Bay drift gillnet optimum number hosted by the Alaska Independent Fishermen's Marketing Association at Fish Expo in Seattle.

- Participated in the Gulf of Alaska Groundfish Rationalization Committee formed by the Board of Fisheries.

- Continued to maintain a professional relationship with the IRS to help Alaska fishermen protect their fishing privileges.

- With the Alaska Attorney General, we continued to defend the state against elimination of nonresident fee differential in the *Carlson* case.



CALENDAR YEAR 2003

- Conducted research, held public hearings, and adopted regulations limiting entry into the Bering Sea hair crab fishery under a vessel-based system.
- Conducted research, held public hearings, and adopted regulations stablishing a point system for the Kodiak *bairdi* Tanner crab pot fishery.
- Continued work on optimum number study for the Bristol Bay salmon drift gillnet fishery.
- Continued efforts to examine options for reducing the size of salmon fleets, throughout the year, by participating in discussions of and as a resource to the Joint Legislative Salmon Industry Task Force, and participating on the advisory panel for an Analysis of Options to Restructure the Bristol Bay Salmon Fishery, an independent study funded and published by the Bristol Bay Economic Development Corporation.
- Addressed the International Association for the Study of Common Property on *License Limitation in Alaska's Commercial Fisheries*.
- Participated in a meeting of the Salmon for Success Summit in Juneau on the status of limited entry permits in Southeast communities.
- Participated in discussions of and a resource to the Gulf of Alaska groundfish rationalization committee formed by the Board of Fisheries to explore options for managing statewaters groundfish fisheries.
- Continued to maintain a professional relationship with the IRS to help Alaska fishermen protect their fishing privileges.
- With the Alaska Attorney General, the Commission continued to defend the state against the *Carlson* case, a class action challenging the fee differential charged to nonresidents for annual renewal of Alaska commercial fishing permits.



CALENDAR YEAR 2002

- Conducted research, held public hearings, and adopted regulations limiting entry into the Kodiak *bairdi* Tanner crab pot fishery.

- Received seven applications for the Kodiak food and bait herring gillnet and seine combined fishery and four applications for the Kodiak food and bait herring trawl fishery. Completed final adjudication of all of the applications for both fisheries and issued five limited entry permits for the Kodiak food and bait herring gillnet and seine combined fishery and four for the Kodiak food and bait herring trawl fishery.

- Adopted regulations implementing the new law (Chapter 134 SLA 2002) that allowed a person to hold up to two salmon permits for purposes of fleet consolidation.

- Continued work on optimum number study for the Bristol Bay salmon drift gillnet fishery.

- Continued efforts to examine options for reducing the size of salmon fleets, throughout the year, by participating in the Governor's 2002 Salmon Summit in Kodiak, Alaska, by participating in discussions of and as a resource to the Joint Legislative Salmon Industry Task Force, participating in a meeting of the Yukon River Drainage Fishermen's Association to discuss options for improving their salmon fishery, participating in a Workshop on Options for Restructuring Alaska's Salmon Fisheries at the University of Alaska in Anchorage, and participating in workshops at the Seattle Fish Expo dealing with the restructuring of Alaska salmon's fisheries.

- Received petitions to limit additional fisheries and began required analysis.

- Continued to maintain a professional relationship with the IRS to help Alaska fishermen protect their fishing privileges.

- With the Alaska Attorney General, the Commission continued to defend the state against elimination of nonresident fee differential in the *Carlson* case.

2001 AND PRIOR YEARS

Information on 2001 and prior years can be found in previous annual reports or on the Internet at the Commission website: http://www.cfec.state.ak.us.





CFEC Commissioners - 1973 to Present

Commissioner	Service
Rickey, Roy	1973 - 1977
Stovall, Charles	1973 - 1977
Jackman, David	1973 - 1974
Carter, Harry	1974 - 1974
Hansen, Harold	???? - 1975
Garner, John	1975 - 1976
Adaisiak, Allan	1977 - 1979
Simon, Robert	1977 - 1982
Garner, John	1977 - 1979
Riley, Burke	1979 - 1982
Williams, John	1979 - 1983
Whitehead, Michael	1982 - 1983
Smith, Philip	1983 - 1991
Listowski, Richard	1983 - 1993
Twomley, Bruce	1982 - Present
Homan, Frank	1991 - 1996
Anderson, Dale	1993 - 1997
Johnson, Marlene	1996 - 2003
McDowell, Mary	1997 - 2005
Homan, Frank	2003 - Present
Froehlich, Peter	2005 - Present

This edition published July 2010

10/19/11 Presentation: Salmon Management on the Arctic-Yukon-Kuskokwim Region

<TARGET><BILL></BILL><SUBJECT>10-19-11 Presentation Salmon Management on the Arctic-Yukon- Kuskokwim Region</SUBJECT><COMM>HFSH27</COMM></TARGET>

HOUSE FISHERIES, OCTOBER 19, 2011
DOCUMENT INDEX

1. AGENDA

2. RESEARCH QUESTIONS ON AYK FISHERIES ISSUES

3. ADFG COVER LETTER TO REP. THOMPSON, OCT. 14, 2011

4. ADFG ANSWER TO QUESTIONS ON AYK FISHERIES ISSUES

5. LEGISLATIVE RESEARCH - AYK STOCKS OF CONCERN (QUESTION 1)

6. ADFG – RDU DETAIL (QUESTION 1)

7. ADFG – COMMERCIAL FISHERIES, PROJECT SUMMARY REPORT ALLOCATIONS (QUESTION 1)

8. ADFG – SPORTS FISH PROJECT SUMMARY REPORT ALLOCATIONS (QUESTION 1)

   a. OSM FISHERIES RESOURCE MONITORING PLANS 2000 - 2010 (QUESTION 1, See Book 2)

9. ADFG – STATE FUNDED PROGRAMS ASSOCIATED WITH STOCKS OF CONCERN (QUESTION 2)

10. ADFG – ALASKA SUSTAINABLE SALMON FUND PROJECTS (QUESTIONS 4 & 6)

11. ADFG – AYK STOCKS OF CONCERN (FISHERIES MANAGEMENT - QUESTION 1)

12. BERING SEA FISHERMEN'S ASSOCIATION – KAREN GLLIS, EXECUTIVE DIRECTOR – TESTIMONY

13. ADFG COMMERCIAL FISHERIES, 2011 PRELIMINARY YUKON RIVER SUMMER SEASON SUMMARY

1

ALASKA STATE LEGISLATURE

Rep. Steve Thompson, Chair
1292 Sadler Way, Ste. 323
Fairbanks, Alaska 99701
Phone: (907) 452-1088
Fax: (907) 452-1146

Members:
Rep. Johnson, Vice-Chair
Rep. Austerman
Rep. Herron
Rep. Pruitt
Rep. Kawasaki
Rep. Miller

HOUSE SPECIAL COMMITTEE ON FISHERIES

TO:	Committee Members and AYK Region Legislators and Staff
FROM:	Representative Steve Thompson
RE:	House Fisheries Committee Hearing – Salmon Management in the Arctic – Yukon - Kuskokwim Region
LOCATION:	Dena'ina Civic and Convention Center Conference Room 3 (Second Floor) 600 W. Seventh Avenue
DATE & TIME:	Wednesday, October 19th at 2:30 p.m.

AGENDA

Salmon Management in the Arctic-Yukon-Kuskokwim Region

2:30 – 2:45 p.m. Opening Comments – Chairman Steve Thompson
Representative Bob Herron

2:45 – 3:30 p.m. ***Alaska Department of Fish & Game – Overview of Management and Funding for the Salmon Fisheries in the AYK Region and Response to Submitted Questions***

Cora Campbell, Commissioner, Department of Fish & Game
Jeff Regnart, Director, Division of Commercial Fisheries
John Linderman, AYK Regional Supervisor Commercial Fisheries
Hazel Nelson, Director, Division of Subsistence

3:30 – 3:45 p.m. ***Resource Management Concerns and Allocation of Management Resources***

Kawerak, Inc. – Rose Fosdick

E-Mail: Representative.Steve.Thompson@legis.state.ak.us

3:45 – 4:00 p.m. ***Local Input Regarding Policies and Management Issues***
Association of Village Council Presidents - Myron Naneng, President

4:00 – 4:15 p.m. ***Community Involvement in Management Decisions and Monitoring***
Yukon River Drainage Fisheries Association - Jill Klein, Executive Director

4:15 – 4:30 ***Cooperative Research & Monitoring: Fisheries Management Begins at the Local Level***
Bering Sea Fishermen's Association – Karen Gillis, Executive Director
Art Nelson, Policy & Outreach Coordinator

4:30 – 4:45 p.m. ***Alaska Department of Fish & Game Committee Questions & Department Comments***

4:45 – 5:30 p.m. ***Public Testimony***

5:30 p.m. ***Committee Closing Comments***

E-Mail: Representative.Steve.Thompson@legis.state.ak.us

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Research Questions on A-Y-K Fisheries Issues

Note: House Fisheries Committee Meeting Oct. 19th

Funding of ADF&G

1. For the past 12 fiscal years, what were the totals for ADF&G's budget broken out by Department Division (except Wildlife) and broken out by Region and by funding source (GF, Federal receipts, AKSSF...)? (Please split out those costs/projects associated with the Fairbanks area from the AYK region.)
2. What projects has the state funded over the past 12 years to address concerns associated with stocks of concern by region? (If it's reasonably possible, break down by management area as well.)
3. Would other sonar sites be helpful to ADF&G in managing salmon fisheries in the AYK region? Please provide a justification for the additional site(s) and estimate the first year and subsequent year costs for one new sonar station in the AYK region (Initial capital and operating costs).
4. Over the last 12 years, what projects in the AYK region have been funded by the AKSSF (this list should not include projects funded through the AYK SSI)?
5. Please identify those projects/activities which the State currently funds to improve fishing opportunities and runs, whether it be for commercial, sport or subsistence fishing. Include the amount of money spent and the location of the project. (i.e., planting of trout fry in lakes, etc.)
6. Please provide the details for how all PCSRF funding has been disbursed by region; using the 5 AKSSF regions: Southeast, Central, AYK, Westward & Cross-region (do not include AYK SSI funding in this report).

Fisheries Management

1. What stocks are currently identified as stocks of concern by ADFG in the State of Alaska? What actions (by river) is the Department taking to address these stocks of concern?

2. What are the implications to a river system and those Alaskans who live nearby if a salmon run is declared a stock of concern?
3. What management actions does the State take to protect stocks of concern as they progress through commercial fishing areas?
4. When a stock is designated as a stock of concern, what is the process for rebuilding the stock?
5. Has ADF&G considered beginning test fisheries in the lower Yukon before June 1? Would the Department require any additional resources to start testing before June 1?

3

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME
OFFICE OF THE COMMISSIONER

SEAN PARNELL, GOVERNOR

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JUNEAU, AK 99811-5526
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October 14, 2011

The Honorable Steve Thompson, Chair
House Special Committee on Fisheries
Alaska State House of Representatives
1292 Sadler Way, Suite 323
Fairbanks, AK 99701

Dear Chairman Thompson:

Thank you for the opportunity to provide information on Alaska Department of Fish and Game's (ADF&G) investment in Arctic-Yukon-Kuskokwim (AYK) region fisheries management and research. The accompanying tables and worksheets provide details on funding levels over the past 12 years, as requested by the House Special Committee on Fisheries. ADF&G has been able to compile summary funding levels for all 12 years dating back to FY 2001, and project specific detail on the most recent six years, FY 2007-2012.

Since 2007, funding for the AYK Region within the Division of Commercial Fisheries has increased from $4.7 million to approximately $7.3 million. Additional projects were also funded out of the division's Special Projects Component, and funding from the Alaska Sustainable Salmon Fund (AKSSF) has totaled over $7.1 million for the region.

This funding includes long term baseline projects and new initiatives focused on increasing knowledge and understanding of AYK salmon populations and reducing uncertainty of salmon assessment programs towards more effective management. This has included initiating new test fishery programs, retrospective analysis and total run reconstruction, escapement monitoring and evaluation, population genetics baseline determination and mixed stock analysis, evaluation of existing sonar methodologies and feasibility of new sonar technologies, and marine and juvenile assessments.

Enclosed are the answers to the individual questions submitted to ADF&G by committee staff. We look forward to discussing this important issue with you at the upcoming

hearing on October 19, 2011. We will have appropriate staff from ADF&G on hand to present information on our programs and answer questions that may arise.

Sincerely,

Cora Campbell

Cora Campbell
Commissioner

Attachments:

Response to Questions on AYK Fisheries
Department of Fish & Game FY01 to FY12 Appropriation Summary
RDU Detail – Department of Fish & Game
ADF&G – Com Fish – Project Summary Report – FY2007-FY2012 Allocations
ADF&G – Sport Fish – Project Summary Report – FY2007-FY2012 Allocations
2001-2010 OSM Fisheries Resource Monitoring Plan
State Funded Programs Associated with Addressing SOC – ADF&G, Com Fish, AYK Region
AKSSF – FFY2000-2010 – Current to Sept., 2011
AYK Stocks of Concern Designations

4

Research Questions on A-Y-K Fisheries Issues

Funding of ADF&G

1. **What were the totals for ADF&G's budget broken out by Department Division (except Wildlife) and broken out by Region and by funding source (GF, Federal receipts, AKSSF...)? (Please split out those costs/projects associated with the Fairbanks area from the AYK region.)**

   A 12 year funding history for the department was prepared by Legislative Finance and is labeled "Department of Fish & Game FY01 to FY12 Appropriation Summary".

   A 12 year history of Commercial and Sport Fish Division Funding Totals are labeled "RDU Detail – Department of Fish & Game".

   Each individual division's funding for the AYK Region are broken out for each fiscal year and labeled, "Alaska Department of Fish and Game – Commercial Fisheries – Project Summary Report – FY20XX Allocation" and "Alaska Department of Fish and Game – Sport Fish – Project Summary Report – FY20XX Allocation". The department only has six years of data (FY 2007-2012) at this level of detail.

   Summary budget and program information for statewide federal Office of Subsistence Management (OSM) grant funded programs are labeled, "20XX OSM Fisheries Resource Monitoring Plan". Please note that the program skips 2009 as OSM switched from an annual to a 2-year reporting cycle at that time.

2. **What projects has the state funded over the past 6 years to address concerns associated with stocks of concern by region? (If it's reasonably possible, break down by management area as well.)**

   Significant state funding is being directed to addressing Stocks of Concern (SOC) in the AYK region during FY12. For Yukon River Programs associated with addressing SOC there are 15 projects totaling $2,192,700; for Norton Sound Programs, 12 projects totaling $506,700; and for the Kuskokwim River Programs, 12 projects totaling $638,100. The document entitled: "State Funded Programs Associated with Addressing Stocks of Concern – Alaska

Department of Fish and Game, Division of Commercial Fisheries, AYK Region (Region III)" outlines existing and new programs within the Division of Commercial Fisheries, AYK Region budget associated with SOC over the last six state fiscal years (SFY 2007-2012). The table is broken down by the total annual allocation for each program and the percentage of the allocation associated with stocks of concern. The "Total Associated w/SOC by SFY" column was calculated based on the percentage of each budget that was associated with a species that has been or is currently listed as a stock of concern in each area.

3. **Would other sonar sites be helpful to ADF&G in managing salmon fisheries in the AYK region? Please provide a justification for the additional site(s) and estimate the first year and subsequent year costs for one new sonar station in the AYK region (Initial capital and operating costs).**

   There could be additional management benefit derived from using sonar to enumerate salmon at the tributary level. Information on tributary salmon passage and escapement could be used to ensure adequate escapements are being achieved, establishing escapement goals as warranted, providing information inseason and post season to manage terminal fisheries at the tributary level, and provide information that enhances understanding of salmon stock status related to run reconstruction, exploitation, and production.

   Dependent on the size of the tributary, geographic differential salary costs of the location, and the number of salmon and other fish species to be enumerated, costs could range from $150,000 for one time start-up and $160,000 annual operating on smaller tributaries, up to $400,000 for one time start-up and $425,000 annual operating on larger tributaries.

4. **Over the last 12 years, what projects in the AYK region have been funded by the AKSSF (this list should not include projects funded through the AYK SSI)?**

   Over the previous 12 years 68 projects have been funded by the AKSSF within the AYK region. These projects are conducted by a wide array of organizations and agencies including: Alaska Department of Fish and Game, National Marine Fisheries Service, the University of Alaska, Yukon River Drainage Fisheries Association, Norton Sound Economic Development Corporation, and the Bering Sea Fishermen's Association. An example of projects conducted in the region are: video monitoring of salmon escapement

on the Sinuk River; Chinook and coho salmon productivity studies on the Unalakleet; juvenile chum salmon stock analysis on the Yukon River, and genetic analysis of Chinook salmon. The document titled "Alaska Sustainable Salmon Fund Projects - (Exclusive of AYK SSI Earmark Projects) – FFY 2000-2010 – Current to September, 2011" offers more detail regarding specific projects and funding levels.

5. **Please identify those projects/activities which the State currently funds to improve fishing opportunities and runs, whether it be for commercial, sport or subsistence fishing. Include the amount of money spent and the location of the project. (i.e., planting of trout fry in lakes, etc.)**

The department has been involved in a technical support and consultation role to provide oversight, direction, and permitting of enhancement activities in northern Norton Sound. Staff at the area, regional, and headquarters level have provided in-kind contributions to these processes as part of their normal job duties and responsibilities. This has included serving on the Norton Sound Regional Planning Team (RPT) and working with the local aquaculture association and interested stakeholders in the development of a long range enhancement plan, review and approval of enhancement program permitting and implementation, and serving as a resource for consultation and expertise on enhancement planning and program implementation.

Enhancement programs implemented in the Norton Sound area to date have primarily been small scale and exploratory in nature, and funded through local organizations or grants. Programs to date have included lake fertilization to enhance sockeye populations and incubation and egg planting of chum and Coho in select Nome area streams. Interest and activity in Norton Sound Area enhancement programs has fluctuated since formation of the RPT and Aquaculture association. The Department remains responsive to this activity and will continue to guide and support ongoing enhancement efforts.

Please reference the spreadsheets relative to question one which catalog specific projects currently conducted in the AYK region.

The Stocked Fisheries Program for Sport Fish Region III stocks hatchery reared fish in 105 to 145 lakes annually in the Tanana River drainage and the Upper Copper/Upper Susitna drainages. Annual program cost has varied but averages about $250,000. This estimate does not include the cost for the hatcheries to produce the fish.

6. **Please provide the details for how all PCRSF funding has been disbursed by region.**

Pacific Coastal Salmon Recovery Funds (PCSRF) and Alaska Sustainable Salmon Funds (AKSSF) are the same. As a context for evaluating funding allocations, please note this program originated in the Southeast Alaska region as the Southeast Sustainable Salmon Fund; the scope of the program was broadened in 2007 to include other regions in competitive calls for proposals (CFPs). The document titled "Alaska Sustainable Salmon Fund Projects - (Exclusive of AYK SSI Earmark Projects) – FFY 2000-2010 – Current to September, 2011" is germane to this question. Total funding by region is provided at the end of the document.

Fisheries Management

1. **What stocks are currently identified as stocks of concern by ADFG in the AYK Region? What actions (by river) is the Department taking to address these stocks of concern?**

In 2000 there were 9 SOC designations throughout the AYK whereas in 2011 there are now four. These are all Stocks of Yield Concern and include Norton Sound chum and Chinook, and Yukon River Chinook. A yield concern arises from a chronic inability, despite the use of specific management measures to maintain expected yields or harvestable surpluses, above a stock's escapement needs. Please see the document titled "AYK Stocks of Concern Designations" and "State Funded Programs Associated with Addressing Stocks of Concern – Alaska Department of Fish and Game, Division of Commercial Fisheries, AYK Region (Region III)" for AYK Stocks of Concern designations and programs.

Based on guidelines and definitions contained in the Sustainable Salmon Policy (5 AAC 39.222. Policy for the management of sustainable salmon fisheries), action plans were developed and adopted by the Board of Fisheries as regulatory management plans and associated regulations for the stock or management district affected. These regulations have been amended over time consistent with stock of concern status. The following regulations are in place for the current stocks of concern in the AYK Region:

Norton Sound Subdistrict 1 chum salmon:

5 AAC 01.175. Waters closed to subsistence fishing.

5 AAC 01.182. Tier II subsistence chum salmon fishery.

5 AAC 01.184. Tier II subsistence chum salmon fishing permits for Subdistrict 1 of the Norton Sound District.
5 AAC 01.190. Subdistrict 1 of the Norton Sound District Chum Salmon Management Plan.
5 AAC 04.358. Chum salmon optimal escapement goal ranges for river systems in Subdistrict 1 of the Norton Sound District.

Norton Sound Subdistricts 2 and 3 chum salmon:
5 AAC 04.390. Subdistricts 2 and 3 of the Norton Sound District Salmon Management Plan.

Norton Sound Subdistricts 5 and 6 Chinook salmon:
5 AAC 01.170. Lawful gear and gear specifications
5 AAC 04.395. Subdistricts 5 and 6 of the Norton Sound District and the Unalakleet River King salmon Management Plan.

Yukon River Chinook salmon:
5 AAC 01.210. Fishing seasons and periods.
5 AAC 01.220. Lawful gear and gear specifications.
5 AAC 05.331. Gillnet specifications and operations.
5 AAC 05.360. Yukon River King Salmon Management Plan.

2. **What are the implications to a river system and those Alaskans who live nearby if a salmon run is declared a stock of concern?**

The primary goal of salmon management is to ensure adequate escapements to sustain salmon runs. If a stock warrants a stock of concern designation the specific designation (Yield, Management, Conservation) dictates the scope and breadth of the affects upon the user of that stock. Once the designation has been determined the State is then obligated to develop or amend management plans and regulations sufficient to address the concern.

The primary tool available to fishery managers to ensure adequate escapements is the management of harvest. If total run size is not adequate to provide for escapements and fulfill the overall harvest demand on the run, harvest must be reduced to ensure adequate escapements. How this impacts Alaskans that rely on these fishery resources is variable dependent on what type of stock of concern designation is warranted (Yield, Management, or Conservation concern in order of severity).

If a yield concern, the lowest level of concern, the typical impacts are seen in the level of commercial and sport harvest opportunities. A yield concern does not necessarily preclude commercial and sport harvest, but the level of harvest and opportunity available will likely be reduced compared to historical trends or expectations.

If a management concern, the impacts would be seen in the commercial, sport, and subsistence fisheries. A management concern designation would typically follow a yield concern. If the management plans and regulations adopted to address a yield concern still result in a chronic inability to achieve adequate escapements and harvest remained below historical or average levels, a management concern may be warranted. The likely impacts of a management concern would be complete closure of the commercial and sport fisheries, and reductions in subsistence harvest and opportunity (such as a Tier II subsistence fishery).

If a conservation concern, the impacts would again be seen in the commercial, sport, and subsistence fisheries, and perhaps have an effect on nearby or proximal fisheries. A conservation concern designation would likely follow a management concern if the management plans and regulations adopted to address a management concern still resulted in a chronic inability to achieve adequate escapements and harvest remained below historical or average levels. A conservation concern would maintain the closure to commercial and sport fisheries, and severe restrictions or a complete closure to the subsistence fishery. It may also require restrictions to nearby or proximal fisheries that do not target the stock of concern in an effort to reduce or eliminate incidental harvest or other indirect impacts on the stock in question.

3. **What management actions does the State take to protect stocks of concern as they progress through commercial fishing areas?**

As referenced in the answers to questions 1 and 2, general actions range from reductions in harvest and opportunity, inclusive of fishery closure, and may also include restrictions in gear, methods and means, and time and area for the fisheries targeting the stock in question. This may include nearby or proximal fisheries contingent on the level of concern.

4. **When a stock is designated as a stock of concern, what is the process for rebuilding the stock?**

The answer to question 1 outlines the process for developing action plans and regulatory changes to ensure adequate escapements will be achieved under stock of concern designations.

5. **Has ADF&G considered beginning test fisheries in the lower Yukon before June 1? Would the Department require any additional resources to start testing before June 1?**

The target operational time for initiating lower Yukon River test fishery operations is late May and prior to June 1 each year. In some years operations have been initiated as early as the third week of May. However, this is contingent on break-up timing and ice conditions, high water, and in-river debris loads. In those years when late break-up or poor river conditions do not allow for test fishery operations in late May, the start date may be after June 1.

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LEGISLATIVE RESEARCH SERVICES

Alaska State Legislature
Division of Legal and Research Services
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Memorandum

TO: Representative Bob Herron
FROM: Susan Haymes, Legislative Analyst
DATE: October 17, 2011
RE: Arctic-Yukon-Kuskokwim (AYK) Stocks of Concern
LRS Report 12.043

You asked about salmon stocks that are currently identified as stocks of concern. Specifically, you asked about Arctic-Yukon-Kuskokwim (AYK) stocks of concern and actions the Alaska Department of Fish and Game (ADF&G) is taking to address those stocks. Additionally, you asked about impacts to an area when a salmon stock is declared a stock of concern.[1]

In 2000, the Alaska Department of Fish and Game (ADF&G) adopted Alaska's Sustainable Salmon Fisheries Policy (5 AAC 39.222). The goal of the policy is to "ensure conservation of salmon and salmon's required marine and aquatic habitats, protection of customary and traditional uses and other uses, and the sustained economic health of Alaska's fishing communities." The policy directs ADF&G to evaluate the health of salmon stocks throughout the state and to provide the Alaska Board of Fisheries (ABOF or Board) with reports on the status of salmon stocks and to identify stocks of concern and make recommendations. Stocks of concern are those salmon stocks that have not met escapement goals or yield expectations over a period of four-five years.[2] Once ADF&G has identified a stock of concern, the ABOF may adopt the recommendation and classify the stock at one of the three following levels:

- **yield concern** is the least severe and results from an inability to maintain expected *harvest* levels over a 4- to 5-year period,
- **management concern** relates to the inability to maintain *escapements* within escapement goal ranges over a 4- to 5-year period despite the use of management measures, and
- **conservation concern** is the most severe and relates to the inability over a 4- to 5-year period to maintain *escapements* above a minimum threshold below which the stock's ability to sustain itself is jeopardized.

If the Board establishes a stock of concern, the ADF&G and the Board are required to develop an action plan to rebuild those stocks through the use of management measures, improved research, and restoring and protecting habitat. The goal of the action plan is to reduce fishing mortality in order to meet spawning escapement goals, to provide for subsistence levels within the amounts necessary for subsistence (ANS) range, and to reestablish the historical range of harvest levels for other users.[3]

The ADF&G reports to the ABOF on the status of the stock of concern and action plan every three years.[4] Depending on escapement and harvest levels, the Board may decide to remove the stock of concern classification, change the classification, and/or implement additional management measures. During the fishing season, ADF&G fisheries biologists are responsible for the in-season management of commercial, subsistence and sport fisheries. Area managers use their emergency order authority to make immediate adjustments such as fishery openings and closures and gear changes to allow the harvest of

[1] You also asked about test fisheries in the Lower Yukon and management actions the ADF&G is taking to protect stocks of concern during commercial fishing activities. We referred those questions to the experts at ADF&G. We have not yet received a reply; however, we understand ADF&G is also sending a response directly to you.

[2] Escapement goals are classified either as "biological escapement goals," which are scientifically-based and represent the escapement estimated to provide the greatest potential for sustained yield, or as "sustainable escapement goals," which represent an escapement level that is known to provide for sustained yield over a five-to ten-year period.

[3] Alaska law, AS 16.05.258, and the Alaska Native Interest Lands Conservation Act (ANILCA) require a priority for subsistence over other consumptive uses.

[4] The board meeting cycle is three years long. The board considers changes to regulations on a region-based schedule every three years.

surplus fish and ensure adequate escapement (AS 16.05.060). Generally, for stocks of concern, AD&G manages more conservatively to ensure escapement goals are achieved and subsistence needs are met.

Currently, 12 salmon stocks are classified as stocks of concern.[5] Four of the stocks are located in the Arctic-Yukon-Kuskokwim (AYK) area, one in the Bristol Bay area, six in the Cook Inlet area, and one in the Southeast area. The following table shows the location of the stock, the species, the designation, the year the stock was first designated, and the current status.

Table 1: Stocks of Concern Designations

Area Stocks	Salmon Species	Original Designation	Year	Current Classification
AYK Area Stocks				
Norton Sound Subdistrict 1 (Nome)	Chum	Management	2000	Yield since 2007
Norton Sound Subdistricts 2 (Golovin) and 3 (Moses Point)	Chum	Yield	2000	Yield
Norton Sound Subdistricts 5 (Shaktoolik) and 6 (Unalakleet)	Chinook (King)	Yield	2004	Yield
Yukon River	Chinook (King)	Yield	2000	Yield
Bristol Bay Area Stocks				
Kvichak River	Sockeye	Yield	2001	Yield
Cook Inlet Area Stocks				
Susitna (Yentna) River	Sockeye	Yield	2008	Yield
Chuitna River	Chinook (King)	Management	2011	Management
Theodore River	Chinook (King)	Management	2011	Management
Lewis River	Chinook (King)	Management	2011	Management
Willow and Goose Creeks	Chinook (King)	Yield	2011	Yield
Alexander Creek	Chinook (King)	Management	2011	Management
Southeast Area Stocks				
McDonald Lake	Sockeye	Management	2009	Recommended for declassification in 2011

Sources: Alaska Department of Fish and Game at *http://www.adfg.alaska.gov/index.cfm?adfg=specialstatus.akfishstocks* ; John Hilsinger and Charlie Swanton, "Memorandum to Board of Fisheries: AYK Stock of Concern Recommendations," September 22, 2009; Alaska Board of Fisheries Findings Regarding Stocks of Concern in the Upper Cook Inlet, March 26, 2011.

For purposes of this report, we focus on stocks of concern in the AYK region.[6] We discuss the management measures used and some of the costs to the communities for each of the four stocks of concern below.

[5] Since 2000, the ABOF has classified a number of stocks as stocks of concern. Some of these stocks are no longer stocks of concern, after meeting escapement and harvest goals. For example, the Yukon summer and fall chum stocks were classified in 2000 as a management concern and yield concern, respectively. Both stocks were delisted in 2007.

[6] We note that escapement goals and management strategies for salmon stocks in the AYK region have been the subject of considerable controversy.

AYK Stocks of Concern and Management Plans

Salmon in the AYK region have been a critical resource for the people and wildlife for thousands of years. Salmon are not only the foundation of the subsistence diet, but commercial salmon fishing provides an important, and sometimes, the only source of cash income in an area of the state with some of the lowest incomes.[7] Over the last 15 years, however, dramatic declines in salmon runs across the AYK region have led to restrictions on subsistence fishing and the closure of many commercial fisheries. Harvest restrictions, including those during the 2010 season, have created tremendous hardships for many communities in the region.[8] While causes of the poor runs are not known with certainty, the regional decline of some stocks indicates that ocean conditions play a critical role. Other possible impacts have also been discussed such as changes in the freshwater environment due to climate change and other factors, and Chinook and chum salmon bycatch in the Bering Sea groundfish trawl fisheries.[9]

Norton Sound Subdistrict 1 (Nome) Chum Salmon

The ABOF classified the Norton Sound Subdistrict 1 chum salmon stock as a stock of *management* concern in September 2000, and adopted an action plan in January 2001.[10] There has not been a commercial chum salmon fishery in the Nome Subdistrict since the 1990s. Sport fishing has also been closed, and until 2006, subsistence salmon management was among the most restrictive in the state. From 1999-2005, the chum salmon subsistence fishery was a Tier II, which restricts subsistence fishing to those households that apply for and receive a subsistence permit. Permits are awarded based on a scoring system that determines a household's historical dependence on chum salmon.

After failing to reach escapement goals in several years, in 2004, the Board maintained the management concern classification. Escapement goals were achieved in 2005 and 2006, and in 2006, Subdistrict 1 reverted back to Tier I subsistence regulations, which allow all Alaska residents to fish during subsistence fishing periods. After the majority of escapement goals were achieved during the 2002-2006 time period, the Board reclassified the chum salmon stock to a yield concern in 2007. Escapement goals were met in 2007 and after, except 2009, when escapement fell short of the lower end of the range. Although, the majority of escapement goals were met, in 2010, the Board retained the yield classification based on low chum salmon harvests from 2005-2009.

In 2010, the Nome Subdistrict escapement of chum salmon was 180 percent above the upper bound of the escapement range setting a new record. As a result, all subsistence catch limits for chum and pink salmon were waived. A record 494 subsistence permits were issued during the 2010 season.[11]

Table 2 shows the management measures that have been adopted by the ABOF and in-season measures used by ADF&G managers since 2001.

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[7] Subsistence is not only an integral part of the culture and traditions of the people of the AYK region, but also supplements the expensive and limited selection of food in village stores. Subsistence activities have been even more important in recent years, given the high cost of fuel and its impact on the cost of food. We note that subsistence and commercial fisheries are often linked. Subsistence fish may be taken during commercial fishing and the profits from commercial fishing help pay for items (boats, outboard motors, guns snow machines, ATVs) needed to perform subsistence activities.

[8] In response to poor salmon runs, regional Native Corporations joined with state agencies, including ADF&G, and federal agencies to form the Arctic-Yukon-Kuskokwim Sustainable Salmon Initiative (AYK SSI) in 2002. The AYK SSI is described as a proactive science-based program working cooperatively to identify and address the critical salmon research needs facing this region. The program has funded numerous research studies on such issues as genetic health and structure of salmon, alternative methods for setting escapement goals, and the role of the marine environment. Arctic-Yukon-Kuskokwim Sustainable Salmon Initiative, "Protecting the Future of Salmon, Research and Discovery Report, 2002-2010," *http://www.aykssi.org/wp-content/uploads/WEB-AYKbsfa-0210_REPORT_cmprssd.pdf*.

[9] Kyle Hopkins, "Feds OK Plan to Cap King Salmon Bycatch," *Anchorage Daily News*, May 20, 2010, *http://www.adn.com/2010/05/19/1286149/feds-ok-plan-to-cap-king-salmon.html*; "Yukon Fisheries News," Spring 2011, Yukon River Drainage Fisheries Association, *http://www.yukonsalmon.com/newsletters/spring11.pdf;* and the AYK Sustainable Initiative, *http://www.aykssi.org/ayk-plan*.

[10] The management stock of concern classification was adopted as a result of persistent low chum salmon runs since the 1980s.

[11] ADF&G News Release, 2010 Norton Sound Salmon Season Summary, December 16, 2010.

Table 2: Norton Sound Subdistrict 1 (Nome) Chum Salmon Management	
Year	**Management Measures**
2000	The Board classifies the chum salmon stock as a management concern. Subsistence chum fishery is managed as a Tier II fishery.
2001	The Board adopts an action plan that 1) closes commercial fishing until certain conditions are met; 2) subsistence fishing will be opened and closed by emergency order on a stream-by-stream basis; 3) a subsistence permit is required and will identify the body of water and annual limit of fish; 4) pink salmon may be taken only with gillnets that have 4.5 inch or less mesh; and 5) allows subsistence hook and line attached to a rod or pole as a lawful gear. Subsistence chum fishery is managed as a Tier II fishery.
2002	Subsistence chum fishery is managed as a Tier II fishery.
2003	Subsistence chum fishery is managed as a Tier II fishery. Subsistence fishery suspended when escapement goal not reached in mid-July.
2004	The Board makes the following changes: requires that subsistence salmon fishermen using hook and line obtain subsistence permits, and repeals pink salmon mesh size restriction. Subsistence chum fishery managed a as a Tier II fishery.
2005	Tier II subsistence fishing until mid-July when restrictions waived. In late July Tier I restrictions are waived.
2006	ADF&G suspends Tier II restrictions. For the first time since 1990, the subdistrict is on a regular subsistence schedule.
2007	ADF&G suspends Tier II restrictions. A strong chum run allows ADF&G to waive subsistence limits. The Board makes the following changes: expands subsistence fishing with hook and line to all areas where sport fishing is allowed; eliminates subsistence permit catch limits in regulation and allows ADF&G to set catch limits based on expected returns; and reduces areas where nets can be used.
2008	No Tier II restrictions, regular subsistence schedule is in effect.
2009	The ADF&G projects a chum surplus; however, subsistence closes in mid-July when escapement falls short.
2010	Escapement of chum salmon was 180 percent above the upper bound of the escapement range. As a result, all subsistence catch limits for chum and pink salmon were waived.

Sources: Jim Menard and Daniel J. Bergstrom, *Norton Sound Subdistrict 1 (Nome) Chum Salmon Stock Status and Action Plan, 2010: A Report to the Alaska Board of Fisherie* s, Special Publication No. 09-20, ADF&G, December 2009; John Hilsinger and Charlie Swanton, Memorandum to Board of Fisheries: AYK Stock of Concern Recommendations, September 22, 2009.

Norton Sound Subdistricts 2 (Golovin) and 3 (Moses Point) Chum Salmon

The Board classified Norton Sound Golovin and Moses Point chum salmon stock as a yield concern in 2000, and adopted an action plan in January 2001 (5 AAC 04.390). As required, the Board reviewed the status of the stock in 2004, 2007 and 2010, and retained the yield concern each time due to low harvest levels.

The poor chum salmon runs in Golovin and Moses Point have mainly impacted the commercial fishery. In 2001, area biologists determined earlier in the season that the chum salmon escapement goal would be reached, and as a result allowed a modest commercial chum harvest. From 2002-2006, however, there was no commercial fishing in either subdistrict due to a lack of market interest and in several years poor chum salmon runs. In 2002, Golovin experienced a poor run, but Moses Point had its third best chum return since the 1980s. Unfortunately, the sole buyer in the area had technical difficulties with a tender and could not buy any fish. For the next three years, poor chum runs prevented a commercial fishery. In 2006, chum salmon rebounded in Moses Point to historic levels, but the run continued to be poor in Golovin. In 2007, both subdistricts experienced a large surplus of chum salmon, but the buyer was only able to purchase fish in Moses Point. In 2008, after one commercial chum opening, the fishery closed because in-season projections showed the escapement goal would not be reached.[12] Both subdistricts remained closed in 2009 to a commercial chum fishery because of a poor run. In 2010 and 2011, however, above average chum salmon runs allowed commercial fishing in both Golovin and Moses Point. The strong runs

[12] In the same year, for the first time in eight years, a buyer returns to Subdistrict 2 and ADF&G allows a commercial coho season. Pink and coho commercial periods occur in Subdistrict 3. Likewise, in 2009, strong coho runs allow commercial fishing in both Subdistricts.

coupled with increased buyer interest in all salmon species have resulted in increased opportunities for commercial salmon fishermen in Golovin and Moses Point.[13]

Since 2000, ADF&G restricted chum salmon subsistence fishing in only one year. Typically, subsistence salmon harvests increase in even-numbered years because of the greater abundance of pink salmon in those years. From 2005 through 2009, subsistence chum salmon harvests averaged 1,767 and 1,216 fish in Golovin and Moses Point, respectively. According to ADF&G's 2010 report to the Board, fisheries managers do not anticipate future restrictions in the chum subsistence fishery because the low exploitation rate of subsistence users has only a minor effect on escapement.

Table 3 shows the management measures that have been adopted by the ABOF and in-season measures used by ADF&G managers since 2001.

Table 3: Norton Sound Subdistricts 2 (Golovin) and 3 (Moses Point) Chum Salmon Management Measures

Year	Management Measures
2001	For the commercial chum salmon fishery, the Board establishes (1) new escapement goals for the Kwiniuk (11,500-23,000) and Tubutulik Rivers (9,200-18,400); (2) the harvest may not exceed 15,000 fish before the mid-July run assessment in subdistrict 2; and (3) the fishery may only occur if the escapement goals will be achieved and subsistence needs are met. Commercial pink fishery can occur only if subsistence needs met and chum salmon escapement is achieved. Commercial coho fishery may occur only when chum salmon escapement goals in certain rivers are achieved. The ADF&G may not restrict subsistence fishing for chum salmon unless the commercial chum salmon season is closed and sport fishing is restricted. The ADF&G provides the authority to establish a subsistence gillnet mesh size restriction of 4.5 inch or less by emergency order when necessary to conserve chum salmon.
2003	The ADF&G implements some restrictions on chum salmon subsistence fishing opportunities.
2004	New chum salmon escapement goal for Niukluk River Tower. Board requires subsistence salmon permits, but does not establish any harvest limits.
2007	Board eliminates the commercial fishing period schedule in Subdistricts 2 and 3 allows ADF&G to set periods by emergency order. For the first time in six years, a buyer returns to Moses Point and commercial chum salmon and coho salmon fishing periods occur.
2008	After one commercial chum salmon period, the Moses Point subdistrict is closed when in-season projections indicate the chum salmon escapement goal will not be met.
2009	Both subdistricts close to commercial chum salmon fishing because projections show escapement goals will not be met. Kwiniuk River counting tower records one of the worst chum salmon escapements on record.
2010	Board makes changes to allow a directed pink salmon fishery after July 6 in Subdistrict 3 and after July 14 in Subdistrict 2, if ADF&G determines a pink salmon fishery will not have a significant impact on escapement or subsistence use of chum salmon. Strong chum run allows commercial fishing.

Source: Jim Menard and Daniel J. Bergstrom, *Norton Sound Subdistrict 2 (Golovin) and Subdistrict 3 (Moses Point) Chum Salmon Stock Status and Action Plan, 2010; a Report to the Alaska Board of Fisheries* , Alaska Department of Fish and Game, December 2009; ADF&G News Release, 2010 Norton Sound Salmon Season Summary, December 16, 2010.

Norton Sound Shaktoolik (Subdistrict 5) and Unalakleet (Subdistrict 6) Chinook Salmon

In January 2004, the ABOF classified the Norton Sound Subdistricts 5 (Shaktoolik) and 6 (Unalakleet) Chinook salmon stock as a yield concern and adopted an action plan. In 2007, after three consecutive years of failing to meet escapement goals despite reductions in harvests, the ABOF continued the yield concern classification and adopted additional measures in an effort to meet escapement goals (5 AAC 04.395). Specifically, the Board established a more restrictive subsistence schedule and a 50 percent reduction in the daily and annual sport fish bag limits. The intent was to enhance Chinook salmon escapements by providing escapement windows between subsistence fishing periods and by reducing sport fish harvests.

[13] Jim Menard, "2011 Norton Sound Salmon Fisheries Management Plan," Regional Information Report No. 3A11-03, May 2011. The report can be accessed at *http://www.adfg.alaska.gov/FedAidPDFs/RIR.3A.2011.03.pdf*. "Norton Sound Salmon Prices Up 20-25 Percent," *Bristol Bay Times*, June 20, 2011, *http://www.thebristolbaytimes.com/article/1125norton_sound_salmon_prices_up_20-25_percent*.

Escapement goals were met in 2007 and 2009. Area managers note that escapement goals may not have been achieved, had it not been for inriver set gillnet mesh size restrictions (six inches or less) and early closures imposed on subsistence and sport fisheries. The mesh size restrictions were intended to allow larger and more fecund females to reach spawning areas. In addition, managers report that restricting commercial mesh size was effective in allowing commercial fishermen to target other salmon while keeping incidental harvests of Chinook salmon low. In 2009, the ADF&G recommended and the ABOF agreed to continue the designation of yield concern, due to low harvests during the most recent 5-year period (2005-2009).

Commercial and subsistence fishermen have both been affected by the poor Chinook salmon runs.[14] As subsistence is the mandated priority use, commercial harvests have taken the brunt of the decrease in available Chinook salmon. Average subsistence harvest rates declined by 47 percent from 1989-1998 to the 2005-2009 time period, while average commercial harvest rates declined by 99 percent during the same time periods. The ADF&G has not allowed any commercial fishing periods targeting Chinook salmon since 2001, except for two periods in 2005, which yielded small harvests. Subsistence and sport fishing closures were implemented in 2003, 2004, and from 2006-2011 to meet escapement needs.

Like the Golovin and Moses Point subdistricts, the Unalakleet and Shaktoolik subdistricts experienced a strong chum run in 2010 and 2011. As a result of renewed market interest in Norton Sound chum and pink salmon, there has been interest in starting commercial fisheries earlier for these species in order to target the peak migration to increase harvests. Fishery managers and subsistence users, however, are concerned about potential impacts to the Chinook stocks, as fishing on chum and pink stocks earlier overlaps with the migration of Chinook salmon. Thus, ADF&G managers continue to cautiously manage the directed chum fishery to minimize the incidental catch of Chinook salmon to protect the Chinook escapement and subsistence fishery.[15] This may result in fewer opportunities for commercial fishermen to harvest at the peak of the other salmon runs.

Table 4 shows the management measures that have been adopted by the ABOF and in-season measures used by ADF&G managers since 2004.

[14] We note that a sport fishery, while small, has been active on the Unalakleet River since the 1960s.

[15] News Release, "2010 Norton Sound Salmon Season Summary," ADF&G, December 16, 2010, and Jim Menard, "2011 Norton Sound Salmon Fisheries Management Plan," Regional Information Report No. 3A11-03, May 2011.

Table 4: Norton Sound SubDistricts 5 (Shaktoolik) and 6 (Unalakleet) Chinook Salmon Management	
Year	**Management Measures**
2004	Board adopts the following measures: (1) if determined necessary for conservation of Chinook salmon, ADF&G may close subsistence fishing and immediately reopen during which time gillnets must have a mesh size not exceeding 6 inches; (2) reduces sport fish daily bag limit for Chinook salmon from 10 to 1 fish; and (3) places an annual sport limit of 4 Chinook salmon 20 inches or greater in the Unalakleet River drainage. Both subdistricts close to commercial Chinook salmon fishing.
2005	ADF&G allows two 24-hour Chinook commercial salmon fishing periods from June 27-30. Catches poor and test fishery and tower counts down, so commercial fishery is closed. Commercial fishing reopened during coho season on July 24.
2006	No commercial Chinook salmon periods. Unalakleet River closes to salmon gillnetting on July 10. Sport fishing is allowed on Unalakleet River, but all Chinook salmon has to be immediately released from July 1-August 3 and the use of bait is prohibited.
2007	Board restricts the subsistence fishing schedule from June 15 to July 15 in Subdistrict 6 to two 48-hour periods per week in the marine water, and two 36-hour periods per week in Unalakleet River. In addition, the Board reduces the sport fish bag limit in the Unalakleet River to one fish per day and an annual harvest limit of two fish. No commercial Chinook fishing is allowed due to weak runs. Because of below average Chinook escapement levels and weak subsistence catch rates in early July, subsistence fishing is closed to set gillnets on July 4 and sport fishing is closed on July 5.
2008	No commercial Chinook salmon fishing is allowed because of poor runs. Subsistence fishing and sport fishing are closed on July 4, due to below average Chinook escapement levels and a sharp decline in subsistence catch rates in late June. ADF&G imposes mesh size restrictions (6 inches or less) on subsistence fishing in Unalakleet River on June 30 to protect Chinook salmon during peak migration period. Subsistence fishing reopens with mesh size restrictions on July 7 and 16.
2009	No commercial Chinook salmon fishing is allowed because of poor runs. Due to below average Chinook escapement levels and a sharp decline in subsistence catch rates in late June, subsistence fishing and sport fishing are closed on July 5. ADF&G imposes mesh size restrictions (6 inches or less) on subsistence fishing in Unalakleet River on June 29 to protect Chinook salmon during peak migration period. Subsistence fishing reopens with mesh size restrictions on July 10.
2010	Board adopts measures directing ADF&G to not allow commercial fishing for pink and chum salmon until July 1, if subsistence fisheries are being restricted in order to reach Chinook salmon escapement goals. Further, the commercial pink or chum fisheries may only occur if ADF&G determines (1) a harvestable surplus of chum or pink salmon exists, and (2) a directed chum or pink fishery will not have a significant impact on escapement goals or subsistence uses of Chinook salmon. Due to poor Chinook run, ADF&G closes Chinook salmon subsistence and sport fishing early.

Source: Scott M. Kent and Daniel J. Bergstrom, *Norton Sound Subdistrict 5 (Shaktoolik) and Subdistrict 6 (Unalakleet) Chinook Salmon Stock Status and Action Plan, 2010: a Report to the Alaska Board of Fisheries* , Alaska Department of Fish and Game, December 2009; ADF&G News Release, 2010 Norton Sound Salmon Season Summary, December 16, 2010.

Yukon River Chinook Salmon

The Yukon River salmon fishery is extremely complex. The river spans approximately 2,000 miles through Canada and Alaska, and along with its tributaries, is the fourth largest drainage basin in North America. Subsistence, commercial and sport fisheries occur throughout the basin and many people depend on the salmon for food, income, and family traditions and cultures. The Yukon River's Chinook salmon is the largest subsistence fishery in the state. The stocks must also be managed for escapement under the Yukon River Salmon Agreement. Salmon that originate in the Canadian portion of the Yukon River drainage are a shared resource between the Yukon Territory (Canada) and Alaska. The Yukon River Panel annually sets escapement targets for Canadian-origin stocks and the number of additional fish that must be provided for Canada's harvest share.[16] Adding to the complexity for managers, are the overlapping multi-species salmon runs, the increasing efficiency of

[16] The Yukon River salmon fisheries are under the international jurisdiction of the Pacific Salmon Treaty. The Yukon River Salmon Agreement was negotiated in 2001. The Yukon River Panel and the Yukon River Drainage Fisheries Association, *Yukon River Salmon Agreement Handbook*, June 2005. The Handbook can be accessed at *http://www.yukonsalmon.org/whatwedo/handbook.pdf*. More information on the Yukon River Panel can be accessed at *http://yukonriverpanel.com/salmon/*.

the salmon fleet, the inability to determine stock specific abundance and run timing, the gauntlet nature of the fisheries, allocation issues between lower river and upper river users, allocation and conservation issues between Alaska and Canada, and the immense size of the drainage.[17] Yukon salmon fisheries managers have three goals: meet established escapement goals in Alaska and Canada; provide for Alaska subsistence users and Canada harvest shares; and when possible provide for commercial, sport and personal use fisheries. Thus, ADF&G managers are in the difficult position of having to meet conservation goals, *and* attend to the hugely important subsistence and commercial fisheries each year.

The ABOF classified the Yukon River Chinook salmon stock as a yield concern at its September 2000 work session. The determination was based on low harvest levels for the previous three-year period (1998-2000) and an anticipated low harvest for 2001. An action plan was adopted by the ABOF in January 2001 (5 AAC 05.360). The Board continued the yield classification in 2004, 2007 and most recently in 2010, due to continued low yields of Chinook salmon.

Chinook salmon escapement goals were generally met throughout the Alaska portion of the Yukon River Drainage the past five years (2005-2009). According to ADF&G, in-season management actions contributed to achieving escapement goals. Nevertheless, escapement goals established by the Yukon River Panel were not met in 2007 or 2008.[18] The Chinook salmon run in 2008 was particularly poor, so no directed commercial fishery occurred.

In 2009, ADF&G initially allowed a subsistence fishery for much of the lower Yukon districts, based on fish counts that appeared strong. After the run did not materialize as thought, ADF& chose not to open a commercial fishery and significantly restricted the up-river subsistence fisheries. In interviews with Yukon fishermen after the 2009 season, people in upper Yukon communities described being especially hard-hit by the 2009 Chinook closures.[19] Upper Yukon communities, which rely more heavily on salmon for subsistence purposes than do communities elsewhere on the river, have been the most vulnerable during difficult years. After visiting Fort Yukon and Chalkyitsk during and after the 2009 season, University of Alaska Fairbanks professors, Philip Loring and Craig Gerlach, noted,

> [W]e counted empty smokehouses and freezers in numbers not before encountered in our collective 25 years of experience in the region. Some also noted that it would be "harder to find good food in the store now." The local consensus was that 2009, in terms of food security, was the "worst year in recent times," and that many people would go hungry this winter.[20]

As a result of two years of poor runs and a poor run predicted for the 2010 season, Governor Parnell requested a fishing disaster declaration. In January 2010, U.S. Commerce Secretary Gary Locke declared a commercial fishing disaster for the Yukon River Chinook salmon fishery.[21]

Ultimately, the escapement goal was attained in 2009 with about a 12,000 fish surplus. Under the terms of the Pacific Salmon Treaty and the Yukon Agreement, the season was considered a success. Given the severe restrictions on subsistence

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[17] Due to the size of the river and dispersed fishing activity, the Yukon salmon fishery is considered a gauntlet fishery. That is the fish must avoid a gauntlet of fishing nets, fishwheels, and other activities to reach spawning grounds.

[18] The outlook for 2007 suggested a run that would provide surplus for commercial fishing so about 33,000 Chinook salmon were harvested in Alaska. The run did not materialize however as projected, and the Canadian border escapement goal was not met. In 2008, the ADF&G began relying on a sonar-based program in Eagle, Alaska, to count Canadian-origin fish. According to ADG&G, the Eagle sonar project dramatically improved accuracy of Chinook salmon passages into Canada. Apportionment of harvest to stock of origin indicates that the Canadian component comprises about 50 percent of the Alaska harvest, and probably the run. Because of the gauntlet nature of the fishery and longer migration distance, ADG&G believes the exploitation exerted on Canadian-origin fish is most likely the highest of any Yukon River Chinook salmon stock.

[19] Philip A. Loring and Craig Gerlach, "Food Security and Conservation of Yukon River Salmon: Are We Asking Too Much of the Yukon River?" *Sustainability*, September 2010, 2, 2965-2987. The article can be accessed at *http://www.mdpi.com/2071-1050/2/9/2965/pdf*.

[20] Philip A. Loring and Craig Gerlach, "Food Security and Conservation of Yukon River Salmon: Are We Asking Too Much of the Yukon River?" *Sustainability*, September 2010, p. 2974. The authors also discuss the impact of fishery closures on what appears to be a recovering moose population in the Yukon Flats area, noting that less fish could lead to increased hunting of moose to supplement the food supply.

[21] Kyle Hopkins, "Lack of Yukon King Salmon Declared Disaster," *Anchorage Daily News*, January 16, 2010. The article can be accessed at *http://www.adn.com/2010/01/15/1095790/lack-of-yukon-king-salmon-declared.html.* Since 1997, the dramatic declines of AYK salmon runs have prompted at least 16 disaster declarations by the state of Alaska and federal agencies.

fishermen, however, some argued that ADF&G's management actions were too conservative and came at the expense of subsistence food, pointing out that 12,000 fish would have fed many families. Managers responded that there is too much uncertainty in the Yukon system to manage the stock with more precision. In other words, it is better to manage the stock conservatively than to once again fall short of conservation goals and treaty obligations.

The following year (2010) Chinook salmon run was much weaker than the preseason projection and early inseason assessments indicated. As a result, the Chinook salmon commercial fishery was closed and the run fell short of the U.S./Canada Treaty obligation. Subsistence fishermen in the upper communities were asked to consider conservation measures such as voluntary harvest reductions, shifting harvest to other species, and spreading harvest over the duration of the run.[22]

As previously noted, the Board met to consider a Yukon River Chinook salmon action plan in January 2010. In order to allow larger fish to get up the river, the Board adopted a 7.5 mesh size for commercial and subsistence fishermen.[23] The new mesh size would be in effect for the 2011 season, which meant fishermen had to obtain new nets. The Pacific State Marine Fisheries Commission, the entity in charge of dispersing disaster assistance, used disaster funds to conduct a net replacement program. Under the program, all documented commercial and subsistence fishermen were provided new 7.5 inch webbing after surrendering their old webbing which was no longer legal.

Table 5 shows the management measures that have been adopted by the ABOF and in-season measures used by ADF&G managers since 2000.

[22] "Yukon River Salmon 2010 Season Summary and 2011 Season Outlook," prepared by the United States and Canada Yukon River Joint Technical Committee, March 2011. The report can be accessed at *http://yukonriverpanel.com/salmon/wp-content/uploads/2009/03/jtc-report-final-2010.pdf.*

[23] "Fisheries Board Limits Yukon Salmon Gillnet Mesh," *Juneau Empire*, February 2, 2010. From 2007-2009 the ADG&G and Yukon Delta Fisheries Development Association (YDFDA) initiated a mesh size study to investigate the performance of gillnets with smaller mesh than 8.5 inch mesh currently used in the unrestricted mesh size fishery. According to ADF&G, overall pattern indicates that larger mesh size catch a greater proportion of older fish, more Chinook salmon relative to chum, a greater proportion of females, and more larger fish. Upper Yukon advisory committees submitted proposals for a 6-inch mesh, to allow more of the larger fish to reach the border. Katherine G. Howard and Danielle F. Evenson, *Yukon River Chinook Salmon Comparative Mesh Size Study*, December 2010, Fishery Data Series No. 10-92, ADF&G. The report can be accessed at *http://www.sf.adfg.state.ak.us/FedAidpdfs/FDS10-92.pdf.*

Table 5: Yukon River Chinook Salmon Management Measures	
Year	**Management Measures**
2000	The ABOF classifies the Chinook salmon stock as a yield concern.
2001	The ABOB modifies the Yukon River Management Plan by adopting a subsistence fishing schedule that allows for a chronological progression upriver as the run advances upstream. The schedule is meant to reduce harvest early when there is a higher level of uncertainty and spread the harvest throughout the run to reduce harvest impacts in one area, and provide fishing subsistence opportunities for all users during years of low salmon runs. The ABOF also provides ADF&G with emergency order authority to restrict subsistence gillnets to no greater than 6 inches mesh size for conservation of Chinook salmon. Sport fishing bag limit is reduced to one Chinook or one chum salmon.
2002	From 2002-2005 commercial fishing is shifted to the midpoint of the Chinook salmon run and later, which allows for passage of an early portion of the Chinook salmon run.
2003	The ABOF amends the subsistence fishing schedule to revert to the pre-2001 regulations, which allows, when sufficient abundance exists for a commercial fishery, for a subsistence fishery to occur at the same time, after a 24-hour period.
2004	The ABOF increases the permit harvest areas and fishing schedule for subsistence fishing in certain subdistricts; requires gillnets greater then 4-inch mesh size to be removed from the water and fish wheels to stop rotating during subsistence closures. The ADF&G begins using genetic stock identification techniques to identify region of origin.
2007	The ABOF allows catch and release of Chinook salmon in Goodpaster River under certain conditions.
2008	No directed Chinook salmon commercial fishing. Sport fishing bag limit is reduced to one fish in-season.
2009	No directed Chinook salmon commercial fishing. Subsistence fishing is reduced by one-half along the mainstem fishing districts 1-5. No fishing on the first pulse to conserve Canada-bound Chinook, and some subsistence openings are closed. In-season genetic stock identification of Chinook salmon is used. Sport fishing bag limit is reduced to one fish in-season in tributaries. Retention of Chinook salmon is prohibited in mainstem Yukon River to protect Canadian stocks.
2010	The Board prohibits subsistence and commercial fishermen from using gillnets with a mesh larger than 7.5 inches.

Sources: Katherine G. Howard, Steve J. Hayes and Danielle F. Evenson, *Yukon River Chinook Salmon Stock Status and Action Plan 2010; a Report to the Alaska Board of Fisheries* , December 2009, Special Publication No. 09-26, ADF&G.

We hope this is helpful. If you have questions or need additional information, please let us know.

DEPARTMENT OF FISH & GAME
FY01 TO FY12 Appropriation Summary

APPROPRIATION	ALLOCATION		FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12*
COMMERCIAL FISHERIES		**TOTAL**	**44,710.5**	**48,024.8**	**49,077.1**	**47,376.6**	**49,260.4**	**54,977.6**	**59,147.2**	**58,724.4**	**60,096.9**	**61,498.8**	**63,579.0**	**67,444.9**
	Southeast Region Fisheries Management		**5,419.6**	**5,432.4**	**5,516.5**	**5,515.4**	**5,407.1**	**5,657.3**	**6,079.0**	**6,010.8**	**7,564.9**	**7,561.8**	**7,957.7**	**8,529.2**
		Fed Rcpts	528.9	533.9	542.4	552.3	451.5	482.1	508.2	508.2	508.2	514.4	162.0	169.6
		G/F Match	371.8	377.7	377.3	380.7	382.9	400.2	400.2	410.8	418.2	183.9	187.8	197.2
		Gen Fund	3,828.7	3,874.4	3,945.7	3,930.5	3,655.2	3,857.5	4,051.8	3,964.4	5,505.7	5,635.5	7,039.0	7,586.5
		Cm Fish Ln	-	-		-	317.5	317.5	167.5	167.5	167.5	167.5	-	-
		Invst Loss	40.1	-	-	-	-	-	-	-	-	-	-	-
		Test Fish	650.1	646.4	651.1	651.9	600.0	600.0	601.3	601.3	601.3	693.6	568.9	575.9
		CFEC Rcpts	-	-	-	-	-	-	350.0	358.6	364.0	366.9	-	-
	Central Region Fisheries Management		**6,147.4**	**6,179.2**	**6,265.8**	**6,171.7**	**6,326.7**	**6,932.6**	**7,582.3**	**7,652.5**	**8,330.0**	**8,518.3**	**8,366.4**	**8,700.3**
		G/F Match	-	-	-	-	-	-	-	-	-	238.7	238.3	251.3
		Gen Fund	5,134.4	5,207.3	5,288.5	5,516.6	5,328.7	6,184.6	6,873.4	6,940.4	7,621.1	7,567.8	7,868.5	8,345.1
		Cm Fish Ln	-	-	-	-	398.0	398.0	-	-	-	-	-	-
		Invst Loss	32.7	-	-	-	-	-	-	-	-	-	-	-
		Test Fish	980.3	971.9	977.3	655.1	600.0	350.0	408.9	408.9	408.9	410.2	259.6	103.9
		CFEC Rcpts	-	-	-	-	-	-	300.0	303.2	300.0	301.6	-	-
	AYK Region Fisheries Management		**4,202.3**	**4,223.8**	**4,281.6**	**4,243.9**	**4,249.1**	**4,501.4**	**4,701.2**	**4,713.6**	**5,735.6**	**6,104.2**	**6,441.0**	**7,281.8**
		Gen Fund	4,007.4	4,055.3	4,112.4	4,209.2	3,929.4	4,181.7	4,345.6	4,357.1	5,379.1	5,747.5	6,400.7	7,240.8
		Cm Fish Ln	-	-	-	-	284.5	284.5	284.5	284.5	284.5	284.5	-	-
		Invst Loss	24.6	-	-	-	-	-	-	-	-	-	-	-
		Test Fish	170.3	168.5	169.2	34.7	35.2	35.2	71.1	72.0	72.0	72.2	40.3	41.0
	Westward Region Fisheries Management		**7,830.0**	**7,825.5**	**7,922.4**	**6,769.5**	**6,775.2**	**7,317.4**	**7,456.4**	**7,504.9**	**9,527.2**	**8,548.4**	**7,698.6**	**9,001.9**
		Gen Fund	5,543.9	5,601.5	5,687.5	5,458.5	5,096.7	5,413.9	5,611.5	5,660.0	7,682.3	6,787.2	6,970.5	7,817.1
		Cm Fish Ln	-	-	-	-	412.8	412.8	412.8	412.8	412.8	412.8	-	-
		Invst Loss	34.8	-	-	-	-	-	-	-	-	-	-	-
		Stat Desig	12.2	-	-	-	-	-	-	-	-	-	-	-
		Test Fish	2,239.1	2,224.0	2,234.9	1,311.0	1,265.7	1,490.7	1,432.1	1,432.1	1,432.1	1,348.4	728.1	1,184.8
	Headquarters Fisheries Management		**4,030.9**	**4,007.5**	**3,781.1**	**2,970.3**	**2,683.9**	**2,860.2**	**6,855.7**	**8,019.6**	**9,350.9**	**9,496.4**	**10,524.4**	**10,819.6**
		Gen Fund	3,268.3	3,273.9	3,047.5	2,236.7	1,795.6	1,971.9	5,591.0	7,097.7	8,429.0	8,574.5	10,142.0	10,437.4
		GF/Prgm	-	-	-	-	-	-	-	-	-	-	382.2	382.2
		Fish/Game	383.6	383.6	383.6	383.6	383.6	-	-	-	-	-	-	-
		Cm Fish Ln	-	-	-	-	274.7	274.7	351.1	351.1	351.1	351.1	-	-
		Invst Loss	4.7	-	-	-	-	-	-	-	-	-	-	-
		CIP Rcpts	-	-	-	-	-	-	-	-	-	-	0.2	-
		Stat Desig	24.3	-	-	-	-	-	-	-	-	-	-	-
		Rcpt Svcs	350.0	350.0	350.0	350.0	230.0		-	-	-	-	-	-
		F&G NonDed	-	-	-	-	-	383.6	383.6	383.6	383.6	383.6	-	-
		CEFC Rcpts	-	-	-	-	-	230.0	530.0	187.2	187.2	187.2	-	-

DEPARTMENT OF FISH & GAME
FY01 TO FY12 Appropriation Summary

APPROPRIATION	ALLOCATION	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12*
COMMERCIAL FISHERIES (continued)													
	Commercial Fisheries Special Projects	**13,419.3**	**16,698.5**	**16,818.2**	**17,027.8**	**19,015.7**	**21,641.3**	**26,472.6**	**24,823.0**	**19,588.3**	**21,269.7**	**22,590.9**	**23,112.1**
	Fed Rcpts	9,406.8	11,649.3	11,756.9	12,709.6	13,925.7	15,532.8	15,760.0	13,760.8	8,514.7	9,528.4	10,674.2	10,274.2
	Gen Fund	-		-	-	59.2	80.0	415.5	495.0	689.6	871.8	1,792.0	2,642.7
	GF/Prgm	-	-	-	-	-	-	-	-	-	-	1,730.9	1,471.1
	I/A Rcpts	1,004.1	1,002.6	1,010.2	1,023.4	1,669.3	1,669.3	1,708.6	1,208.6	1,208.6	908.6	802.6	802.6
	EVOS Trust	-	-	-	202.7	204.8	382.3	595.0	595.0	595.0	595.1	345.1	345.1
	Fish/Game	1,090.6	1,100.1	1,110.8	1,123.4	1,143.7	11.3	-	-	-	-	-	200.0
	CIP Rcpts	-	-	-	-	-	-	2,646.9	1,890.0	1,890.1	2,490.1	3,083.7	3,383.7
	Stat Desig	1,589.8	1,580.3	1,595.4	1,614.7	1,654.3	2,446.6	2,907.4	4,407.4	4,234.4	4,262.4	4,112.4	3,992.7
	EVOS Rest	-	32.1	-	-	-	-	-	-	-	-	-	-
	Rcpt Svcs	328.0	1,334.1	1,344.9	354.0	358.7	362.1	501.7	503.5	505.1	505.7	-	-
	F&G NonDed	-	-	-	-	-	1,156.9	1,187.5	1,194.8	1,200.8	1,207.6	-	-
	CEFC Rcpts	-	-	-	-	-	-	750.0	767.9	750.0	750.0	-	-
	Stimulus09	-	-	-	-	-	-	-	-	-	150.0	50.0	-
	Commercial Fish Capital Imporvement Position Costs	**1,165.2**	**1,155.2**	**1,898.0**	**2,285.1**	**2,415.7**	**3,080.7**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**-**
	CIP Rcpts	1,165.2	1,155.2	1,898.0	2,285.1	2,415.7	3,080.7	-	-	-	-	-	-
	Fisheries Development	**2,248.7**	**2,256.6**	**2,346.5**	**2,392.9**	**2,387.0**	**2,986.7**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	Gen Fund	2,203.3	2,254.3	2,344.2	2,390.6	2,208.6	2,808.3	-	-	-	-	-	-
	Cm Fish Ln	-	-	-	-	178.4	178.4	-	-	-	-	-	-
	Invst Loss	15.9	-	-	-	-	-	-	-	-	-	-	-
	Stat Desig	29.5	2.3	2.3	2.3	-	-	-	-	-	-	-	-
	Commercial Fish EVOS Restoration Projects	**247.1**	**246.1**	**247.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**-**
	EVOS Trust	247.1	246.1	247.0	-	-	-	-	-	-	-	-	-
SPORT FISHERIES	**TOTAL**	**24,959.3**	**26,886.4**	**28,556.9**	**35,957.8**	**39,328.3**	**43,496.1**	**48,133.3**	**48,466.5**	**49,184.0**	**47,681.4**	**48,914.0**	**48,405.4**
	Sport Fisheries	**22,630.0**	**22,655.3**	**24,019.1**	**24,714.9**	**26,191.5**	**27,133.0**	**42,149.6**	**42,366.7**	**43,007.5**	**47,681.4**	**48,914.0**	**44,301.9**
	Fed Rcpts	10,765.3	10,520.8	12,004.3	12,234.9	13,281.9	13,879.2	20,282.0	21,296.2	20,810.5	22,843.0	23,074.8	19,268.5
	Gen Fund	20.0	20.0	-	-	-	-	1,244.5	2,081.3	3,196.9	3,771.8	4,728.3	5,939.0
	I/A Rcpts	-	-	-	-	-	-	1,277.5	1,277.5	1,277.5	1,760.1	1,762.8	1,787.7
	EVOS Trust	-	-	-	-	-	-	-	-	-	339.0	339.0	339.4
	Fish/Game	11,806.1	12,056.5	11,972.6	12,437.8	12,867.4	13,203.3	15,967.8	14,171.9	14,175.1	14,736.4	14,889.1	13,137.9
	Cm Fish Ln	-	-	-	-	-	-	-	-	-	5.9	-	-
	IA/Oil Haz	-	-	-	-	-	-	-	-	-	18.5	18.5	18.5
	CIP Rcpts	-	-	-	-	-	-	1,887.0	1,891.7	1,895.5	1,994.8	2,030.6	2,030.6
	Stat Desig	38.6	58.0	42.2	42.2	42.2	41.5	1,131.8	1,139.1	1,143.0	1,702.9	1,570.9	1,280.3
	F&G NonDed	-	-	-	-	-	9.0	9.0	9.0	9.0	9.0	-	-
	Sportfish	-	-					350.0	500.0	500.0	500.0	500.0	500.0
	Sport Fisheries Special Projects	**2,329.3**	**4,231.1**	**4,537.8**	**7,122.9**	**6,886.7**	**10,459.9**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	Fed Rcpts	1,944.7	3,056.6	2,278.0	3,699.8	2,885.3	5,415.1	-	-	-	-	-	-
	Gen Fund	-	-	-	-	8.0	119.3	-	-	-	-	-	-
	I/A Rcpts	121.3	421.4	1,000.0	1,463.7	1,653.6	1,224.3	-	-	-	-	-	-
	EVOS Trust	-	-	-	50.0	-	-	-	-	-	-	-	-
	Fish/Game	100.0	155.5	613.4	677.4	681.8	921.9	-	-	-	-	-	-
	CIP Rcpts	-	434.1	482.7	1,067.1	1,236.8	1,676.1	-	-	-	-	-	-
	Stat Desig	163.3	163.5	163.7	164.9	421.2	1,103.2	-	-	-	-	-	-

DEPARTMENT OF FISH & GAME
FY01 TO FY12 Appropriation Summary

APPROPRIATION	ALLOCATION	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12*
SPORT FISHERIES (continued)													
	Sport Fisheries Research and Restoration	**0.0**	**0.0**	**0.0**	**3,631.9**	**6,007.8**	**5,665.0**	**5,983.7**	**6,099.8**	**6,176.5**	**0.0**	**0.0**	**0.0**
	Fed Rcpts	-	-	-	1,189.6	2,655.3	2,260.7	2,314.6	2,314.6	2,314.6	-	-	-
	Gen Fund	-	-	-	265.9	271.0	316.3	434.6	529.9	608.0	-	-	-
	I/A Rcpts	-	-	-	1,364.1	722.0	1,231.3	1,336.6	1,336.6	1,336.6	-	-	-
	EVOS Trust	-	-	-	-	436.2	334.9	338.7	338.8	339.0	-	-	-
	Fish/Game	-	-	-	0.9	525.3	532.2	561.3	561.3	561.3	-	-	-
	Cm Fish Ln	-	-	-	-	5.9	5.9	5.9	5.9	5.9			
	IA/Oil Haz	-	-	-	98.7	64.3	64.3	64.3	65.5	66.5			
	CIP Rcpts	-	-	-	531.1	917.5	98.3	98.3	101.4	98.3	-	-	-
	Stat Desig	-	-	-	181.6	410.3	821.1	829.4	845.8	846.3	-	-	-
	Assert/Protect State's Rights	**0.0**	**0.0**	**0.0**	**488.1**	**242.3**	**238.2**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	Fish/Game	-	-	-	488.1	242.3	238.2	-	-	-	-	-	-
	Sport Fish Hatcheries	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**4,103.5**
	Fed Rcpts	-	-	-	-	-	-	-	-	-	-	-	3,806.3
	Gen Fund	-	-	-	-	-	-	-	-	-	-	-	46.0
	Fish/Game	-	-	-	-	-	-	-	-	-	-	-	251.2
CRYSTAL LAKE HATCHERY	**TOTAL**	**606.7**	**192.7**	**192.7**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	Crystal Lake Hatchery	**606.7**	**192.7**	**192.7**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	I/A Rcpts	192.7	-	-	-	-	-	-	-	-	-	-	-
	Fish/Game	192.7	192.7	192.7	-	-	-	-	-	-	-	-	-
	Stat Desig	221.3	-	-	-	-	-	-	-	-	-	-	-
WILDLIFE CONSERVATION	**TOTAL**	**21,771.0**	**24,931.8**	**28,165.0**	**29,100.2**	**31,033.9**	**30,748.0**	**34,683.4**	**35,013.0**	**36,685.7**	**36,746.8**	**41,976.4**	**43,512.7**
	Wildlife Conservation	**17,319.5**	**17,840.7**	**17,300.0**	**17,492.5**	**19,146.5**	**18,790.2**	**21,358.7**	**22,539.4**	**24,584.9**	**25,073.4**	**29,386.6**	**30,856.4**
	Fed Rcpts	6,260.0	7,017.2	8,100.0	8,553.8	9,424.4	9,061.4	9,452.8	10,363.0	11,047.7	11,572.3	15,122.3	15,515.1
	Gen Fund	251.6	253.7	-	-	73.3	696.7	1,543.1	3,145.0	4,781.4	4,825.2	5,566.3	6,639.7
	GF/Prgm	-	-	-	-	-	-	-	-	-	-	85.9	89.5
	Fish/Game	10,807.9	10,569.8	9,200.0	8,938.7	9,648.8	8,951.7	8,951.7	8,951.0	8,675.4	8,594.1	8,612.1	8,612.1
	Invst Loss	-	-	-	-	-	-	1,330.7	-	-	-	-	-
	F&G NonDed	-	-	-	-	-	80.4	80.4	80.4	80.4	81.8	-	-
	Wildlife Conservation Restoration Program	**0.0**	**0.0**	**5,036.3**	**5,577.1**	**5,685.4**	**4,602.7**	**4,759.2**	**3,834.3**	**3,442.8**	**0.0**	**0.0**	-
	Fed Rcpts	-	-	4,000.0	4,529.3	4,606.2	3,699.1	3,764.0	3,203.6	2,753.8	-	-	-
	Gen Fund	-	-	32.3	-	3.3	528.8	620.4	630.7	689.0	-	-	-
	Fish/Game	-	-	1,004.0	1,047.8	1,075.9	374.8	374.8	-	-	-	-	-
	Wildlife Conservation Special Projects	**3,399.1**	**4,437.6**	**4,911.6**	**6,030.6**	**6,202.0**	**7,355.1**	**7,759.4**	**7,968.2**	**8,049.9**	**11,059.3**	**11,875.7**	**11,923.8**
	Fed Rcpts	2,876.3	3,775.4	4,245.9	4,644.7	4,721.2	5,551.0	5,951.5	5,951.5	4,571.5	8,053.4	8,318.0	8,592.2
	Gen Fund	-	-	-	-	6.1	77.6	37.8	134.0	1,388.8	912.9	945.2	998.5
	GF/Prgm	17.9	-	-	-	-	-	-	-	-	-	-	-
	I/A Rcpts	223.1	221.3	224.4	759.4	789.4	789.4	824.5	824.5	714.5	726.0	1,229.0	1,229.0
	EVOS Trust	-	-	-	50.0	50.0	50.0	80.0	150.0	200.0	50.0	50.0	50.0
	Fish/Game	-	83.8	84.2	84.2	84.2	325.2	325.2	325.2	325.2	325.2	375.2	375.2
	CIP Rcpts	-	-	-	-	-	-	-	182.3	285.0	384.2	113.3	67.6
	Stat Desig	281.8	357.1	357.1	492.3	551.1	561.9	540.4	400.7	564.9	607.6	845.0	611.3
	Wildlife Conservation Capital Improvement Position Costs	**302.0**	**302.7**	**159.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	-
	CIP Rcpts	302.0	302.7	159.0	-	-	-	-	-	-	-	-	-
	Wildlife Conservation EVOS Restoration Projects	**544.4**	**544.8**	**547.5**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	-
	EVOS TRUST	544.4	544.8	547.5	-	-	-	-	-	-	-	-	-

DEPARTMENT OF FISH & GAME
FY01 TO FY12 Appropriation Summary

APPROPRIATION	ALLOCATION	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12*
WILDLIFE CONSERVATION (continued)													
Assert/Protect State's Rights		206.0	206.0	210.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Fish/Game	206.0	206.0	210.6	-	-	-	-	-	-	-	-	-
CARA Implementation		0.0	1,600.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Fed Rcpts	-	1,600.0	-	-	-	-	-	-	-	-	-	-
Hunter Education Public Shooting Ranges		0.0	0.0	0.0	0.0	0.0	0.0	806.1	671.1	608.1	614.1	714.1	732.5
	Gen Fund	-	-	-	-	-	-	126.1	139.1	-	-	-	-
	GF/Prgm	-	-	-	-	-	-	-	-	-	-	284.8	295.8
	I/A Rcpts	-	-	-	-	-	-	150.0	-	-	-	-	-
	Fish/Game	-	-	-	-	-	-	530.0	532.0	608.1	614.1	429.3	436.7
HUNTER EDUCATION PUBLIC SHOOTING RANGES	**TOTAL**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**787.2**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Hunter Education Public Shooting Ranges		0.0	0.0	0.0	0.0	0.0	787.2	0.0	0.0	0.0	0.0	0.0	-
	Gen Fund	-	-	-	-	-	1.1	-	-	-	-	-	-
	I/A Rcpts	-	-	-	-	-	150.0	-	-	-	-	-	-
	Fish/Game	-	-	-	-	-	636.1	-	-	-	-	-	-
COMMISSIONER'S OFFICE	**TOTAL**	**1,037.3**	**860.7**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Commissioner's Office		1,037.3	860.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Fed Rcpts	222.6	222.7	-	-	-	-	-	-	-	-	-	-
	Gen Fund	628.6	551.2	-	-	-	-	-	-	-	-	-	-
	I/A Rcpts	44.2	44.3	-	-	-	-	-	-	-	-	-	-
	CIP Rcpts	41.9	42.5	-	-	-	-	-	-	-	-	-	-
	EVOS Rest	100.0	-	-	-	-	-	-	-	-	-	-	-
ADMINISTRATION AND SUPPORT	**TOTAL**	**6,874.7**	**6,951.2**	**14,025.8**	**17,347.2**	**20,833.0**	**23,080.3**	**23,818.9**	**25,228.2**	**26,058.5**	**26,426.4**	**28,823.7**	**29,442.2**
Commissioner's Office		0.0	0.0	879.1	815.4	1,062.7	1,302.1	1,470.8	1,552.7	1,638.1	1,590.5	1,805.2	1,852.1
	Fed Rcpts	-	-	227.7	229.7	238.2	116.2	171.9	171.9	171.9	171.9	171.9	171.9
	Gen Fund	-	-	562.4	466.8	469.8	684.3	724.7	678.1	801.7	753.0	794.1	841.0
	I/A Rcpts	-	-	45.5	75.0	290.7	434.0	454.1	554.6	516.4	516.4	702.6	702.6
	EVOS Trust	-	-	-	-	-	-	50.0	54.5	54.5	54.5	54.5	54.5
	Cm Fish Ln	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	-	-
	CIP Rcpts	-	-	43.5	43.9	46.0	49.6	52.1	55.6	55.6	56.4	56.5	56.5
	Stat Desig	-	-	-	-	-		-	20.0	20.0	20.3	25.6	25.6
Public Communications		135.7	135.7	136.9	109.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	I/A Rcpts	135.7	135.7	136.9	109.6	-	-	-	-	-	-	-	-
Administrative Services		4,983.0	5,007.6	5,558.7	5,694.8	6,156.2	8,070.9	8,984.3	9,617.4	9,923.0	10,520.8	11,582.4	12,056.6
	Fed Rcpts	1,051.1	1,049.9	1,317.4	1,334.0	1,375.8	1,416.1	1,840.0	1,840.0	1,592.2	1,792.8	1,934.0	1,934.0
	Gen Fund	952.7	980.5	986.0	976.9	1,134.6	1,558.0	1,838.1	1,913.4	2,311.6	2,402.9	2,625.8	2,887.1
	GF/Prgm	11.9	11.9	11.9	11.9	11.9	11.9	11.9	17.9	17.9	17.9	141.9	141.9
	I/A Rcpts	2,601.6	2,598.6	2,868.7	2,989.3	3,235.9	4,410.9	4,569.7	4,969.7	4,970.6	5,271.3	5,983.1	6,176.9
	EVOS Trust	-	-	-	-	-	200.0	208.5	312.4	315.2	317.8	318.6	327.9
	Fish/Game	105.1	106.7	108.9	111.9	117.9	124.0	124.0	124.0	124.0	124.0	-	-
	Cm Fish Ln	-	-	-	-	45.5	45.5	45.5	45.5	45.5	45.5	-	-
	CIP Rcpts	155.3	153.5	156.8	159.4	117.2	183.1	190.2	248.1	254.6	257.2	257.6	267.4
	Stat Desig	105.3	106.5	109.0	111.4	117.4	121.4	156.4	146.4	291.4	291.4	321.4	321.4

DEPARTMENT OF FISH & GAME
FY01 TO FY12 Appropriation Summary

APPROPRIATION	ALLOCATION	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12*
ADMINISTRATION AND SUPPORT (continued)													
	Fish and Game Boards and Advisory Committees	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**1,780.7**	**1,801.1**	**1,830.9**	**1,649.6**	**1,763.7**	**1,871.6**
	Fed Rcpts	-	-	-	-	-	-	267.5	267.7	267.5	57.8	58.3	58.6
	Gen Fund	-	-	-	-	-	-	1,081.4	1,111.5	1,135.4	1,148.6	1,292.8	1,399.9
	GF/Prgm	-	-	-	-	-	-	-	-	-	-	1.0	1.0
	I/A Rcpts	-	-	-	-	-	-	390.1	390.2	390.3	390.5	390.9	390.9
	Cm Fish Ln	-	-	-	-	-	-	31.7	31.7	31.7	31.7	-	-
	CIP Rcpts	-	-	-	-	-	-	-	-	-	15.0	15.6	16.1
	Stat Desig	-	-	-	-	-	-	10.0	-	6.0	6.0	5.1	5.1
	Boards of Fish & Game	**1,214.1**	**1,256.2**	**1,166.6**	**856.2**	**1,068.8**	**1,253.5**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	Fed Rcpts	337.5	337.5	237.5	162.5	162.5	162.5	-	-	-	-	-	-
	Gen Fund	706.7	748.8	759.2	523.8	565.4	750.1	-	-	-	-	-	-
	I/A Rcpts	169.9	169.9	169.9	169.9	319.9	319.9	-	-	-	-	-	-
	Cm Fish Ln	-	-	-	-	21.0	21.0	-	-	-	-	-	-
	Advisory Committees	**541.9**	**551.7**	**407.3**	**397.0**	**410.1**	**490.4**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	Fed Rcpts	180.0	180.0	30.0	105.0	105.0	105.0	-	-	-	-	-	-
	Gen Fund	361.9	371.7	377.3	292.0	294.4	309.7	-	-	-	-	-	-
	I/A Rcpts	-	-	-	-	-	65.0	-	-	-	-	-	-
	Cm Fish Ln	-	-	-	-	10.7	10.7	-	-	-	-	-	-
	State Subsistence	**0.0**	**0.0**	**4,605.0**	**4,308.6**	**4,359.4**	**4,319.1**	**4,650.2**	**4,844.5**	**5,229.6**	**5,218.2**	**5,893.2**	**5,852.4**
	Fed Rcpts	-	-	2,253.5	2,137.0	2,214.0	2,321.8	2,422.9	2,127.9	1,600.5	1,600.5	1,625.8	1,606.9
	Gen Fund	-	-	224.1	233.9	1,072.2	1,345.5	1,493.1	1,614.0	2,000.2	1,988.8	2,534.1	2,519.4
	I/A Rcpts	-	-	538.1	544.9	410.0	198.2	205.0	370.0	570.0	570.0	818.5	818.5
	EVOS Trust	-	-	369.2	371.3	379.3	16.9	16.9	140.6	140.0	140.0	-	-
	Cm Fish Ln	-	-	-	800.0	9.3	9.3	9.3	9.3	9.3	9.3	-	-
	CIP Rcpts	-	-	-	-	50.3	125.5	126.7	127.2	254.1	254.1	259.0	251.8
	Stat Desig	-	-	220.1	221.5	224.3	301.9	376.3	455.5	655.5	655.5	655.8	655.8
	AIDEA Div	-	-	1,000.0	-	-	-	-	-	-	-	-	-
	EVIS Trustee Council	**0.0**	**0.0**	**0.0**	**3,881.6**	**4,447.7**	**4,277.8**	**3,638.4**	**3,573.7**	**3,598.1**	**3,608.5**	**3,640.4**	**3,670.7**
	Fed Rcpts	-	-	-	100.0	990.4	999.2	582.8	582.8	582.8	582.8	582.8	582.8
	EVOS Trust	-	-	-	3,681.6	3,357.3	3,253.6	3,055.6	2,990.9	3,015.3	3,025.7	3,057.6	3,087.9
	Stat Desig	-	-	-	100.0	100.0	25.0	-	-	-	-	-	-
	State Facilities Maintenance	**0.0**	**0.0**	**1,008.8**	**1,008.8**	**1,008.8**	**1,008.8**	**1,008.8**	**1,308.8**	**1,308.8**	**1,308.8**	**1,608.8**	**1,608.8**
	I/A Rcpts	-	-	1,008.8	1,008.8	1,008.8	1,008.8	1,008.8	1,308.8	1,308.8	1,308.8	1,608.8	1,608.8
	Fish and Game Facilities Rent	**0.0**	**0.0**	**263.4**	**275.2**	**2,319.3**	**2,357.7**	**2,285.7**	**2,530.0**	**2,530.0**	**2,530.0**	**2,530.0**	**2,530.0**
	Gen Fund	-	-	181.8	193.6	2,237.7	2,357.7	2,285.7	2,530.0	2,530.0	2,530.0	2,530.0	2,530.0
	Rcpt Svcs	-	-	81.6	81.6	81.6	-	-	-	-	-	-	-
STATE FACILITIES MAINTENANCE	**TOTAL**	**1,178.4**	**1,260.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	State Facilities Maintenance	**1,008.8**	**1,008.8**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	I/A Rcpts	1,008.8	1,008.8	-	-	-	-	-	-	-	-	-	-
	Fish and Game Facilities Rent	**169.6**	**251.2**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	Gen Fund	169.6	169.6	-	-	-	-	-	-	-	-	-	-
	Rcpt Svcs	-	81.6	-	-	-	-	-	-	-	-	-	-
SUBSISTENCE	**TOTAL**	**2,786.9**	**2,780.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	Subsistence	**218.6**	**219.3**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	Gen Fund	218.6	219.3	-	-	-	-	-	-	-	-	-	-
	Subsistence Special Projects	**2,199.4**	**2,191.8**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	Fed Rcpts	2,088.8	2,081.7	-	-	-	-	-	-	-	-	-	-
	I/A Rcpts	40.6	40.1	-	-	-	-	-	-	-	-	-	-
	Stat Desig	70.0	70.0	-	-	-	-	-	-	-	-	-	-

DEPARTMENT OF FISH & GAME
FY01 TO FY12 Appropriation Summary

APPROPRIATION	ALLOCATION	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12*
	Subsistence EVOS Restoration Projects	**368.9**	**368.9**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	EVOS Trust	368.9	368.9	-	-	-	-	-	-	-	-	-	-
SUBSISTENCE RESEARCH & MONITORING	**TOTAL**	**1,400.6**	**1,398.3**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	Subsistence Research & Monitoring	**1,400.6**	**1,398.3**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	Gen Fund	903.5	906.7	-	-	-	-	-	-	-	-	-	-
	I/A Rcpts	497.1	491.6	-	-	-	-	-	-	-	-	-	-
HABITAT	**TOTAL**	**11,015.4**	**11,962.4**	**6,933.2**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**4,116.8**	**5,224.8**	**6,169.3**	**5,955.3**
	Habitat	**1,775.5**	**5,328.8**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**4,116.8**	**5,224.8**	**6,169.3**	**5,955.3**
	Fed Rcpts	-	380.1	-	-	-	-	-	-	-	105.1	105.2	105.2
	G/F Match	124.7	204.1	-	-	-	-	-	-	-	-	-	-
	Gen Fund	94.8	1,746.6	-	-	-	-	-	-	2,919.9	3,447.3	3,577.9	3,752.2
	I/A Rcpts	1,300.6	2,481.3	-	-	-	-	-	-	688.4	988.4	1,781.4	1,389.4
	I/A OIL HAZ	68.1	96.5	-	-	-	-	-	-	-	95.0	105.0	105.0
	CIP Rcpts	-	-	-	-	-	-	-	-	225.6	328.1	335.3	335.3
	Stat Desig	187.3	420.2	-	-	-	-	-	-	282.9	260.9	264.5	268.2
	Habitat Special Projects	**2,151.8**	**2,701.6**	**3,313.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	Fed Rcpts	654.8	794.9	802.3	-	-	-	-	-	-	-	-	-
	G/F Match	97.8	99.0	99.4	-	-	-	-	-	-	-	-	-
	I/A Rcpts	636.5	635.0	645.5	-	-	-	-	-	-	-	-	-
	CIP Rcpts	285.0	694.5	1,285.9	-	-	-	-	-	-	-	-	-
	Stat Desig	477.7	478.2	479.9	-	-	-	-	-	-	-	-	-
	Habitat Permitting/Title 16	**3,163.3**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	Fed Rcpts	381.6	-	-	-	-	-	-	-	-	-	-	-
	G/F Match	79.3	-	-	-	-	-	-	-	-	-	-	-
	Gen Fund	1,448.6	-	-	-	-	-	-	-	-	-	-	-
	I/A Rcpts	1,024.3	-	-	-	-	-	-	-	-	-	-	-
	Stat Desig	229.5	-	-	-	-	-	-	-	-	-	-	-
	Exxon Valdez Restoration	**3,924.8**	**3,932.0**	**3,620.2**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	EVOS Trust	3,924.8	3,932.0	3,620.2	-	-	-	-	-	-	-	-	-
COMMERCIAL FISHERIES ENTRY COMMISSION	**TOTAL**	**2,728.1**	**2,896.7**	**3,018.5**	**2,755.7**	**2,894.3**	**3,257.3**	**3,545.3**	**3,763.1**	**3,902.6**	**3,954.7**	**4,077.3**	**4,198.5**
	Commercial Fisheries Entry Commission	**2,728.1**	**2,896.7**	**3,018.5**	**2,755.7**	**2,894.3**	**3,257.3**	**3,545.3**	**3,763.1**	**3,902.6**	**3,954.7**	**4,077.3**	**4,198.5**
	Fed Rcpts	109.2	110.2	111.6	112.4	114.4	114.4	114.4	114.4	114.4	114.4	114.4	114.4
	Gen Fund	-	-	-	-	-	281.4	302.5	-	-	-	-	-
	I/A Rcpts	-	-	50.0	50.4	52.7	52.7	55.5	-	-	-	-	-
	Invest Loss	55.1	-	-	-	-	-	-	-	-	-	-	-
	Rcpt Svcs	2,563.8	2,786.5	2,856.9	2,592.9	2,727.2	-	-	-	-	-	-	-
	CFEC Rcpts	-	-	-	-	-	2,808.8	3,072.9	3,648.7	3,788.2	3,840.3	3,962.9	4,084.1
F&G FUND CAPITALIZATION	**TOTAL**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**3,588.7**	**0.0**	**0.0**	**0.0**	**0.0**
	Fish and Game Fund	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**3,588.7**	**0.0**	**0.0**	**0.0**	**0.0**
	GF/Prgm	-	-	-	-	-	-	-	2,125.7	-	-	-	-
	Sportfish	-	-	-	-	-	-	-	1,463.0	-	-	-	-

DEPARTMENT OF FISH & GAME
FY01 TO FY12 Appropriation Summary

APPROPRIATION	ALLOCATION	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12*
DEPT OF FISH & GAME TOTAL		**119,068.9**	**128,145.0**	**129,969.2**	**132,537.5**	**143,349.9**	**156,346.5**	**169,328.1**	**174,783.9**	**180,044.5**	**181,532.9**	**193,539.7**	**198,959.0**
	UGF	30,624.1	30,915.6	29,025.6	27,075.7	28,592.1	33,924.6	40,351.7	43,432.4	58,087.9	57,387.4	65,233.3	72,070.9
	DGF	7,311.4	8,574.9	8,677.8	6,843.1	7,886.6	9,494.9	11,016.7	13,421.1	11,426.8	11,502.3	8,186.5	8,371.2
	Other	44,325.8	45,344.3	44,358.3	46,324.1	49,719.4	51,810.4	54,527.1	55,427.8	55,679.5	55,556.4	58,126.2	56,317.2
	Fed	36,807.6	43,310.2	47,907.5	52,294.6	57,151.8	61,116.6	63,432.6	62,502.6	54,850.3	57,086.8	61,993.7	62,199.7

**FY01 through FY11 are Final Budget columns and FY12 is 12Budget column.*

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RDU Detail

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Department of Fish and Game

RDU: Commercial Fisheries (143)

	FY2012 Authorized	FY2011 Authorized	FY2010 Authorized	FY2009 Authorized	FY2008 Authorized	FY2007 Authorized
71000 Personal Services	45,851.0	43,055.3	40,551.6	38,374.5	36,299.6	37,700.4
72000 Travel	1,731.8	1,723.0	1,694.0	1,656.7	1,655.9	1,615.0
73000 Services	14,632.4	13,793.4	13,797.1	15,155.0	14,276.3	14,546.9
74000 Commodities	4,177.5	4,302.6	4,365.1	4,200.3	4,046.1	4,364.5
75000 Capital Outlay	1,052.2	835.4	863.4	883.4	885.4	920.4
77000 Grants, Benefits	0.0	0.0	0.0	0.0	0.0	0.0
78000 Miscellaneous	0.0	0.0	0.0	0.0	0.0	0.0
Totals	**67,444.9**	**63,709.7**	**61,271.2**	**60,269.9**	**57,163.3**	**59,147.2**
Funding						
1002 Fed Rcpts (Other)	10,443.8	10,836.2	10,042.8	9,022.9	14,268.2	16,268.2
1003 G/F Match (UGF)	448.5	421.9	422.6	418.2	399.1	400.2
1004 Gen Fund (UGF)	44,069.6	40,348.1	35,106.7	35,306.8	27,004.8	26,888.8
1005 GF/Prgm (DGF)	1,853.3	2,112.6	0.0	0.0	0.0	0.0
1007 I/A Rcpts (Other)	802.6	802.6	908.6	1,208.6	1,208.6	1,708.6
1018 EVOSS (Other)	345.1	345.1	595.1	595.0	595.0	595.0
1024 Fish/Game (Other)	200.0	0.0	0.0	0.0	0.0	0.0
1036 Cm Fish Ln (DGF)	0.0	0.0	1,215.9	1,215.9	1,215.9	1,215.9
1061 CIP Rcpts (Other)	3,383.7	3,083.9	2,490.1	1,890.1	1,890.0	2,646.9
1108 Stat Desig (Other)	3,992.7	4,112.4	4,262.4	4,407.4	4,407.4	2,907.4
1109 Test Fish (DGF)	1,905.6	1,596.9	2,524.4	2,514.3	2,514.3	2,513.4
1156 Rcpt Svcs (DGF)	0.0	0.0	505.7	505.1	501.7	501.7
1194 F&G Nonded (DGF)	0.0	0.0	1,591.2	1,584.4	1,571.1	1,571.1
1201 CFEC Rcpts (DGF)	0.0	0.0	1,605.7	1,601.2	1,587.2	1,930.0
1212 Fed ARRA (Other)	0.0	50.0	0.0	0.0	0.0	0.0
Funding						
Unrestricted General	**44,518.1**	**40,770.0**	**35,529.3**	**35,725.0**	**27,403.9**	**27,289.0**
Designated General	**3,758.9**	**3,709.5**	**7,442.9**	**7,420.9**	**7,390.2**	**7,732.1**
Other Totals	**8,724.1**	**8,344.0**	**8,256.2**	**8,101.1**	**8,101.0**	**7,857.9**
Federal Totals	**10,443.8**	**10,886.2**	**10,042.8**	**9,022.9**	**14,268.2**	**16,268.2**
Positions:						
Permanent Full Time	314	316	312	306	299	304
Permanent Part Time	450	454	465	476	497	503
Non Permanent	3	3	1	0	0	0

RDU Detail

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Department of Fish and Game

RDU: Commercial Fisheries (143)

	FY2006 Authorized	FY2005 Authorized	FY2004 Authorized	FY2003 Authorized	FY2002 Authorized	FY2001 Authorized
71000 Personal Services	35,499.8	33,235.2	31,668.5	32,122.0	31,088.3	29,011.1
72000 Travel	1,565.5	1,477.9	1,561.1	1,465.9	1,460.9	1,320.9
73000 Services	12,862.0	11,323.8	10,806.6	12,007.2	11,966.5	10,710.2
74000 Commodities	4,020.4	2,788.9	2,992.4	3,134.0	3,129.0	2,645.3
75000 Capital Outlay	885.4	342.4	348.0	348.0	348.0	563.0
77000 Grants, Benefits	0.0	0.0	0.0	0.0	32.1	60.0
78000 Miscellaneous	0.0	0.0	0.0	0.0	0.0	0.0
Totals	**54,833.1**	**49,168.2**	**47,376.6**	**49,077.1**	**48,024.8**	**44,310.5**
Funding						
1002 Fed Rcpts (Other)	16,014.9	14,301.7	13,261.9	12,299.3	12,183.2	9,535.7
1003 G/F Match (UGF)	400.2	381.4	380.7	377.3	377.7	371.8
1004 Gen Fund (UGF)	24,553.4	22,088.1	23,742.1	24,425.8	24,266.7	23,986.0
1007 I/A Rcpts (Other)	1,669.3	1,669.3	1,023.4	1,010.2	1,002.6	1,004.1
1018 EVOSS (Other)	382.3	204.4	202.7	247.0	246.1	247.1
1024 Fish/Game (Other)	11.3	1,523.0	1,507.0	1,494.4	1,483.7	1,474.2
1036 Cm Fish Ln (DGF)	1,865.9	1,865.9	0.0	0.0	0.0	0.0
1053 Invst Loss (UGF)	0.0	0.0	0.0	0.0	0.0	152.8
1061 CIP Rcpts (Other)	3,080.7	2,396.7	2,285.1	1,898.0	1,155.2	1,165.2
1108 Stat Desig (Other)	2,246.6	1,648.7	1,617.0	1,597.7	1,582.6	1,655.8
1109 Test Fish (DGF)	2,475.9	2,500.9	2,652.7	4,032.5	4,010.8	4,039.8
1114 EVOS Rest (Other)	0.0	0.0	0.0	0.0	32.1	0.0
1156 Rcpt Svcs (DGF)	592.1	588.1	704.0	1,694.9	1,684.1	678.0
1194 F&G Nonded (DGF)	1,540.5	0.0	0.0	0.0	0.0	0.0
Funding						
Unrestricted General	**24,953.6**	**22,469.5**	**24,122.8**	**24,803.1**	**24,644.4**	**24,510.6**
Designated General	**6,474.4**	**4,954.9**	**3,356.7**	**5,727.4**	**5,694.9**	**4,717.8**
Other Totals	**7,390.2**	**7,442.1**	**6,635.2**	**6,247.3**	**5,502.3**	**5,546.4**
Federal Totals	**16,014.9**	**14,301.7**	**13,261.9**	**12,299.3**	**12,183.2**	**9,535.7**
Positions:						
Permanent Full Time	300	315	324	323	306	291
Permanent Part Time	512	515	518	526	540	552
Non Permanent	0	0	19	21	15	15

RDU Detail

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Department of Fish and Game

RDU: Sport Fisheries (145)

	FY2012 Authorized	FY2011 Authorized	FY2010 Authorized	FY2009 Authorized	FY2008 Authorized	FY2007 Authorized
71000 Personal Services	29,403.7	28,546.3	27,025.7	27,489.2	26,072.0	27,342.9
72000 Travel	1,147.2	1,197.2	1,200.8	1,261.8	1,216.8	1,086.8
73000 Services	15,326.0	17,101.0	16,968.9	17,708.7	17,428.4	16,836.4
74000 Commodities	2,328.5	2,328.5	2,286.2	2,386.2	2,319.2	2,419.1
75000 Capital Outlay	200.0	75.0	188.1	338.1	338.1	448.1
77000 Grants, Benefits	0.0	0.0	0.0	0.0	0.0	0.0
78000 Miscellaneous	0.0	0.0	0.0	0.0	0.0	0.0
Totals	**48,405.4**	**49,248.0**	**47,669.7**	**49,184.0**	**47,374.5**	**48,133.3**
Funding						
1002 Fed Rcpts (Other)	23,074.8	23,160.9	22,843.0	23,125.1	23,610.8	22,596.6
1004 Gen Fund (UGF)	5,985.0	4,837.3	3,760.1	3,804.9	1,529.7	1,679.1
1007 I/A Rcpts (Other)	1,787.7	1,762.8	1,760.1	2,614.1	2,614.1	2,614.1
1018 EVOSS (Other)	339.4	339.4	339.0	339.0	338.7	338.7
1024 Fish/Game (Other)	13,389.1	14,935.5	14,736.4	14,736.4	14,733.2	16,529.1
1036 Cm Fish Ln (DGF)	0.0	0.0	5.9	5.9	5.9	5.9
1055 IA/OIL HAZ (Other)	18.5	18.5	18.5	66.5	64.3	64.3
1061 CIP Rcpts (Other)	2,030.6	2,089.0	1,994.8	1,993.8	1,989.6	1,985.3
1108 Stat Desig (Other)	1,280.3	1,604.6	1,702.9	1,989.3	1,979.2	1,961.2
1194 F&G Nonded (DGF)	0.0	0.0	9.0	9.0	9.0	9.0
1199 SFEntAcct (Other)	500.0	500.0	500.0	500.0	500.0	350.0
Funding						
Unrestricted General	**5,985.0**	**4,837.3**	**3,760.1**	**3,804.9**	**1,529.7**	**1,679.1**
Designated General	**0.0**	**0.0**	**14.9**	**14.9**	**14.9**	**14.9**
Other Totals	**19,345.6**	**21,249.8**	**21,051.7**	**22,239.1**	**22,219.1**	**23,842.7**
Federal Totals	**23,074.8**	**23,160.9**	**22,843.0**	**23,125.1**	**23,610.8**	**22,596.6**
Positions:						
Permanent Full Time	231	230	233	251	245	245
Permanent Part Time	204	208	206	207	216	217
Non Permanent	19	19	19	19	19	20

RDU Detail

DRAFT

Department of Fish and Game

RDU: Sport Fisheries (145)

	FY2006 Authorized	FY2005 Authorized	FY2004 Authorized	FY2003 Authorized	FY2002 Authorized	FY2001 Authorized
71000 Personal Services	24,141.9	21,877.4	19,547.2	16,145.3	15,290.9	13,896.2
72000 Travel	1,251.8	959.3	946.4	721.2	707.6	581.2
73000 Services	15,397.1	14,145.7	12,651.6	9,196.0	8,888.9	7,810.9
74000 Commodities	2,277.2	2,049.8	1,919.3	2,174.6	1,554.6	1,429.2
75000 Capital Outlay	348.1	147.2	405.2	319.8	444.4	343.1
77000 Grants, Benefits	0.0	0.0	0.0	0.0	0.0	0.0
78000 Miscellaneous	0.0	0.0	0.0	0.0	0.0	0.0
Totals	**43,416.1**	**39,179.4**	**35,469.7**	**28,556.9**	**26,886.4**	**24,060.6**
Funding						
1002 Fed Rcpts (Other)	21,555.0	18,754.7	17,124.3	14,282.3	13,577.4	11,811.3
1004 Gen Fund (UGF)	435.6	266.0	265.9	0.0	20.0	20.0
1007 I/A Rcpts (Other)	2,375.6	2,375.6	2,827.8	1,000.0	421.4	121.3
1018 EVOSS (Other)	334.9	434.8	50.0	0.0	0.0	0.0
1024 Fish/Game (Other)	14,895.6	14,269.7	13,116.1	12,586.0	12,212.0	11,906.1
1036 Cm Fish Ln (DGF)	5.9	5.9	0.0	0.0	0.0	0.0
1055 IA/OIL HAZ (Other)	64.3	64.0	98.7	0.0	0.0	0.0
1061 CIP Rcpts (Other)	1,774.4	2,135.2	1,598.2	482.7	434.1	0.0
1108 Stat Desig (Other)	1,965.8	873.5	388.7	205.9	221.5	201.9
1194 F&G Nonded (DGF)	9.0	0.0	0.0	0.0	0.0	0.0
Funding						
Unrestricted General	**435.6**	**266.0**	**265.9**	**0.0**	**20.0**	**20.0**
Designated General	**14.9**	**5.9**	**0.0**	**0.0**	**0.0**	**0.0**
Other Totals	**21,410.6**	**20,152.8**	**18,079.5**	**14,274.6**	**13,289.0**	**12,229.3**
Federal Totals	**21,555.0**	**18,754.7**	**17,124.3**	**14,282.3**	**13,577.4**	**11,811.3**
Positions:						
Permanent Full Time	228	222	203	163	162	162
Permanent Part Time	231	236	241	250	256	230
Non Permanent	17	17	17	17	19	12

RDU Detail

Department of Fish and Game

DRAFT

RDU: Commercial Fisheries (143)

	FY2012 Authorized	FY2011 Authorized	FY2010 Authorized	FY2009 Authorized	FY2008 Authorized	FY2007 Authorized
71000 Personal Services	45,851.0	43,055.3	40,551.6	38,374.5	36,299.6	37,700.4
72000 Travel	1,731.8	1,723.0	1,694.0	1,656.7	1,655.9	1,615.0
73000 Services	14,632.4	13,793.4	13,797.1	15,155.0	14,276.3	14,546.9
74000 Commodities	4,177.5	4,302.6	4,365.1	4,200.3	4,046.1	4,364.5
75000 Capital Outlay	1,052.2	835.4	863.4	883.4	885.4	920.4
77000 Grants, Benefits	0.0	0.0	0.0	0.0	0.0	0.0
78000 Miscellaneous	0.0	0.0	0.0	0.0	0.0	0.0
Totals	**67,444.9**	**63,709.7**	**61,271.2**	**60,269.9**	**57,163.3**	**59,147.2**
Funding						
1002 Fed Rcpts (Other)	10,443.8	10,836.2	10,042.8	9,022.9	14,268.2	16,268.2
1003 G/F Match (UGF)	448.5	421.9	422.6	418.2	399.1	400.2
1004 Gen Fund (UGF)	44,069.6	40,348.1	35,106.7	35,306.8	27,004.8	26,888.8
1005 GF/Prgm (DGF)	1,853.3	2,112.6	0.0	0.0	0.0	0.0
1007 I/A Rcpts (Other)	802.6	802.6	908.6	1,208.6	1,208.6	1,708.6
1018 EVOSS (Other)	345.1	345.1	595.1	595.0	595.0	595.0
1024 Fish/Game (Other)	200.0	0.0	0.0	0.0	0.0	0.0
1036 Cm Fish Ln (DGF)	0.0	0.0	1,215.9	1,215.9	1,215.9	1,215.9
1061 CIP Rcpts (Other)	3,383.7	3,083.9	2,490.1	1,890.1	1,890.0	2,646.9
1108 Stat Desig (Other)	3,992.7	4,112.4	4,262.4	4,407.4	4,407.4	2,907.4
1109 Test Fish (DGF)	1,905.6	1,596.9	2,524.4	2,514.3	2,514.3	2,513.4
1156 Rcpt Svcs (DGF)	0.0	0.0	505.7	505.1	501.7	501.7
1194 F&G Nonded (DGF)	0.0	0.0	1,591.2	1,584.4	1,571.1	1,571.1
1201 CFEC Rcpts (DGF)	0.0	0.0	1,605.7	1,601.2	1,587.2	1,930.0
1212 Fed ARRA (Other)	0.0	50.0	0.0	0.0	0.0	0.0
Funding						
Unrestricted General	**44,518.1**	**40,770.0**	**35,529.3**	**35,725.0**	**27,403.9**	**27,289.0**
Designated General	**3,758.9**	**3,709.5**	**7,442.9**	**7,420.9**	**7,390.2**	**7,732.1**
Other Totals	**8,724.1**	**8,344.0**	**8,256.2**	**8,101.1**	**8,101.0**	**7,857.9**
Federal Totals	**10,443.8**	**10,886.2**	**10,042.8**	**9,022.9**	**14,268.2**	**16,268.2**
Positions:						
Permanent Full Time	314	316	312	306	299	304
Permanent Part Time	450	454	465	476	497	503
Non Permanent	3	3	1	0	0	0

RDU Detail

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Department of Fish and Game

RDU: Commercial Fisheries (143)

	FY2006 Authorized	FY2005 Authorized	FY2004 Authorized	FY2003 Authorized	FY2002 Authorized	FY2001 Authorized
71000 Personal Services	35,499.8	33,235.2	31,668.5	32,122.0	31,088.3	29,011.1
72000 Travel	1,565.5	1,477.9	1,561.1	1,465.9	1,460.9	1,320.9
73000 Services	12,862.0	11,323.8	10,806.6	12,007.2	11,966.5	10,710.2
74000 Commodities	4,020.4	2,788.9	2,992.4	3,134.0	3,129.0	2,645.3
75000 Capital Outlay	885.4	342.4	348.0	348.0	348.0	563.0
77000 Grants, Benefits	0.0	0.0	0.0	0.0	32.1	60.0
78000 Miscellaneous	0.0	0.0	0.0	0.0	0.0	0.0
Totals	**54,833.1**	**49,168.2**	**47,376.6**	**49,077.1**	**48,024.8**	**44,310.5**
Funding						
1002 Fed Rcpts (Other)	16,014.9	14,301.7	13,261.9	12,299.3	12,183.2	9,535.7
1003 G/F Match (UGF)	400.2	381.4	380.7	377.3	377.7	371.8
1004 Gen Fund (UGF)	24,553.4	22,088.1	23,742.1	24,425.8	24,266.7	23,986.0
1007 I/A Rcpts (Other)	1,669.3	1,669.3	1,023.4	1,010.2	1,002.6	1,004.1
1018 EVOSS (Other)	382.3	204.4	202.7	247.0	246.1	247.1
1024 Fish/Game (Other)	11.3	1,523.0	1,507.0	1,494.4	1,483.7	1,474.2
1036 Cm Fish Ln (DGF)	1,865.9	1,865.9	0.0	0.0	0.0	0.0
1053 Invst Loss (UGF)	0.0	0.0	0.0	0.0	0.0	152.8
1061 CIP Rcpts (Other)	3,080.7	2,396.7	2,285.1	1,898.0	1,155.2	1,165.2
1108 Stat Desig (Other)	2,246.6	1,648.7	1,617.0	1,597.7	1,582.6	1,655.8
1109 Test Fish (DGF)	2,475.9	2,500.9	2,652.7	4,032.5	4,010.8	4,039.8
1114 EVOS Rest (Other)	0.0	0.0	0.0	0.0	32.1	0.0
1156 Rcpt Svcs (DGF)	592.1	588.1	704.0	1,694.9	1,684.1	678.0
1194 F&G Nonded (DGF)	1,540.5	0.0	0.0	0.0	0.0	0.0
Funding						
Unrestricted General	**24,953.6**	**22,469.5**	**24,122.8**	**24,803.1**	**24,644.4**	**24,510.6**
Designated General	**6,474.4**	**4,954.9**	**3,356.7**	**5,727.4**	**5,694.9**	**4,717.8**
Other Totals	**7,390.2**	**7,442.1**	**6,635.2**	**6,247.3**	**5,502.3**	**5,546.4**
Federal Totals	**16,014.9**	**14,301.7**	**13,261.9**	**12,299.3**	**12,183.2**	**9,535.7**
Positions:						
Permanent Full Time	300	315	324	323	306	291
Permanent Part Time	512	515	518	526	540	552
Non Permanent	0	0	19	21	15	15

RDU Detail

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Department of Fish and Game

RDU: Sport Fisheries (145)

	FY2012 Authorized	FY2011 Authorized	FY2010 Authorized	FY2009 Authorized	FY2008 Authorized	FY2007 Authorized
71000 Personal Services	29,403.7	28,546.3	27,025.7	27,489.2	26,072.0	27,342.9
72000 Travel	1,147.2	1,197.2	1,200.8	1,261.8	1,216.8	1,086.8
73000 Services	15,326.0	17,101.0	16,968.9	17,708.7	17,428.4	16,836.4
74000 Commodities	2,328.5	2,328.5	2,286.2	2,386.2	2,319.2	2,419.1
75000 Capital Outlay	200.0	75.0	188.1	338.1	338.1	448.1
77000 Grants, Benefits	0.0	0.0	0.0	0.0	0.0	0.0
78000 Miscellaneous	0.0	0.0	0.0	0.0	0.0	0.0
Totals	**48,405.4**	**49,248.0**	**47,669.7**	**49,184.0**	**47,374.5**	**48,133.3**
Funding						
1002 Fed Rcpts (Other)	23,074.8	23,160.9	22,843.0	23,125.1	23,610.8	22,596.6
1004 Gen Fund (UGF)	5,985.0	4,837.3	3,760.1	3,804.9	1,529.7	1,679.1
1007 I/A Rcpts (Other)	1,787.7	1,762.8	1,760.1	2,614.1	2,614.1	2,614.1
1018 EVOSS (Other)	339.4	339.4	339.0	339.0	338.7	338.7
1024 Fish/Game (Other)	13,389.1	14,935.5	14,736.4	14,736.4	14,733.2	16,529.1
1036 Cm Fish Ln (DGF)	0.0	0.0	5.9	5.9	5.9	5.9
1055 IA/OIL HAZ (Other)	18.5	18.5	18.5	66.5	64.3	64.3
1061 CIP Rcpts (Other)	2,030.6	2,089.0	1,994.8	1,993.8	1,989.6	1,985.3
1108 Stat Desig (Other)	1,280.3	1,604.6	1,702.9	1,989.3	1,979.2	1,961.2
1194 F&G Nonded (DGF)	0.0	0.0	9.0	9.0	9.0	9.0
1199 SFEntAcct (Other)	500.0	500.0	500.0	500.0	500.0	350.0
Funding						
Unrestricted General	**5,985.0**	**4,837.3**	**3,760.1**	**3,804.9**	**1,529.7**	**1,679.1**
Designated General	**0.0**	**0.0**	**14.9**	**14.9**	**14.9**	**14.9**
Other Totals	**19,345.6**	**21,249.8**	**21,051.7**	**22,239.1**	**22,219.1**	**23,842.7**
Federal Totals	**23,074.8**	**23,160.9**	**22,843.0**	**23,125.1**	**23,610.8**	**22,596.6**
Positions:						
Permanent Full Time	231	230	233	251	245	245
Permanent Part Time	204	208	206	207	216	217
Non Permanent	19	19	19	19	19	20

RDU Detail

DRAFT

Department of Fish and Game

RDU: Sport Fisheries (145)

	FY2006 Authorized	FY2005 Authorized	FY2004 Authorized	FY2003 Authorized	FY2002 Authorized	FY2001 Authorized
71000 Personal Services	24,141.9	21,877.4	19,547.2	16,145.3	15,290.9	13,896.2
72000 Travel	1,251.8	959.3	946.4	721.2	707.6	581.2
73000 Services	15,397.1	14,145.7	12,651.6	9,196.0	8,888.9	7,810.9
74000 Commodities	2,277.2	2,049.8	1,919.3	2,174.6	1,554.6	1,429.2
75000 Capital Outlay	348.1	147.2	405.2	319.8	444.4	343.1
77000 Grants, Benefits	0.0	0.0	0.0	0.0	0.0	0.0
78000 Miscellaneous	0.0	0.0	0.0	0.0	0.0	0.0
Totals	**43,416.1**	**39,179.4**	**35,469.7**	**28,556.9**	**26,886.4**	**24,060.6**
Funding						
1002 Fed Rcpts (Other)	21,555.0	18,754.7	17,124.3	14,282.3	13,577.4	11,811.3
1004 Gen Fund (UGF)	435.6	266.0	265.9	0.0	20.0	20.0
1007 I/A Rcpts (Other)	2,375.6	2,375.6	2,827.8	1,000.0	421.4	121.3
1018 EVOSS (Other)	334.9	434.8	50.0	0.0	0.0	0.0
1024 Fish/Game (Other)	14,895.6	14,269.7	13,116.1	12,586.0	12,212.0	11,906.1
1036 Cm Fish Ln (DGF)	5.9	5.9	0.0	0.0	0.0	0.0
1055 IA/OIL HAZ (Other)	64.3	64.0	98.7	0.0	0.0	0.0
1061 CIP Rcpts (Other)	1,774.4	2,135.2	1,598.2	482.7	434.1	0.0
1108 Stat Desig (Other)	1,965.8	873.5	388.7	205.9	221.5	201.9
1194 F&G Nonded (DGF)	9.0	0.0	0.0	0.0	0.0	0.0
Funding						
Unrestricted General	**435.6**	**266.0**	**265.9**	**0.0**	**20.0**	**20.0**
Designated General	**14.9**	**5.9**	**0.0**	**0.0**	**0.0**	**0.0**
Other Totals	**21,410.6**	**20,152.8**	**18,079.5**	**14,274.6**	**13,289.0**	**12,229.3**
Federal Totals	**21,555.0**	**18,754.7**	**17,124.3**	**14,282.3**	**13,577.4**	**11,811.3**
Positions:						
Permanent Full Time	228	222	203	163	162	162
Permanent Part Time	231	236	241	250	256	230
Non Permanent	17	17	17	17	19	12

State Funded Programs Associated with Addressing Stocks of Concern
Alaska Department of Fish and Game, Division of Commercial Fisheries, AYK Region (Region III)

AYK Regional Programs

Project No.	Title	TOTAL ALLOCATION BY SFY (x1000) 2007	2008	2009	2010	2011	2012	% Associated w/ SOC	TOTAL ASSOCIATED W/SOC BY SFY (x1000) 2007	2008	2009	2010	2011	2012	Comments
FM-30908	AYK Anchorage Admin Unit	$283.3	$314.9	$381.8	$395.9	$404.2	$412.1	45%	$127.5	$141.7	$171.8	$178.2	$181.9	$185.4	Long term base GF allocation
FM-500	Program Management, AYK Region	$445.6	$541.9	$610.9	$573.9	$1,122.4	$755.1	45%	$200.5	$243.9	$274.9	$258.3	$505.1	$339.8	Long term operating GF allocation
FM-501	Biometrics Support, AYK Region	$299.4	$337.0	$309.8	$323.9	$327.0	$354.0	45%	$134.7	$151.7	$139.4	$145.8	$147.2	$159.3	Long term operating GF allocation
FM-502	AYK Sonar Program Management	$211.8	$289.9	$235.1	$246.6	$236.4	$216.6	75%	$158.9	$217.4	$176.3	$185.0	$177.3	$162.5	Long term operating GF allocation
							AYK Regional Subtotal		**$621.6**	**$754.6**	**$762.5**	**$767.1**	**$1,011.4**	**$847.0**	

Kuskokwim River Programs

Project No.	Title	TOTAL ALLOCATION BY SFY (x1000) 2007	2008	2009	2010	2011	2012	% Associated w/ SOC	TOTAL ASSOCIATED W/SOC BY SFY (x1000) 2007	2008	2009	2010	2011	2012	Comments
FM-540	Program Management, Kuskokwim Area	$362.1	$344.8	$302.1	$310.6	$340.1	$338.4	40%	$144.8	$137.9	$120.8	$124.2	$136.0	$135.4	Long term operating GF allocation
FM-541	Fishery Monitroing Kuskokwim Area	$75.8	$84.5	$79.2	$83.2	$82.7	$89.4	50%	$37.9	$42.3	$39.6	$41.6	$41.4	$44.7	Long term operating GF allocation
FM-542	Kuskokwim River Run Assessment	$155.0	$174.5	$162.9	$155.5	$141.5	$181.9	60%	$93.0	$104.7	$97.7	$93.3	$84.9	$109.1	Long term operating GF allocation
FM-543	Escapement Surveys, KRS	$12.2	$12.2	$12.2	$12.2	$12.2	$12.2	60%	$7.3	$7.3	$7.3	$7.3	$7.3	$7.3	Long term operating GF allocation
FM-544	Kogrukluk River Weir	$68.4	$70.6	$78.0	$75.3	$79.1	$84.0	50%	$34.2	$35.3	$39.0	$37.7	$39.6	$42.0	Long term operating GF allocation
FM-545	Aniak River Sonar	$60.9	$65.5	$82.7	$74.7	$76.5	$83.0	100%	$60.9	$65.5	$82.7	$74.7	$76.5	$83.0	Long term operating GF allocation
FM-546	Kuskokwim Tagging	$155.6	$169.0	$145.4	$144.1	$141.7	$137.8	60%	$93.4	$101.4	$87.2	$86.5	$85.0	$82.7	Long term operating GF allocation
FM-547	Kuskokwim R Subsistence Monitoring	$0.0	$0.0	$37.9	$40.0	$41.4	$43.9	50%	$0.0	$0.0	$19.0	$20.0	$20.7	$22.0	Long term operating GF allocation
FM-548	Kuskokmwim Area Stock Biology	$39.7	$43.1	$40.0	$40.4	$25.2	$40.5	40%	$15.9	$17.2	$16.0	$16.2	$10.1	$16.2	Long term operating GF allocation
FM-549	Kuskokmwim Test Fish (BTF)	$48.3	$53.1	$50.2	$51.0	$52.9	$56.2	60%	$29.0	$31.9	$30.1	$30.6	$31.7	$33.7	Long term operating GF allocation
SP-480	AYK Kusko Mark Recapture	$45.0	$50.2	$45.0	$45.0	$45.0	$45.0	60%	$27.0	$30.1	$27.0	$27.0	$27.0	$27.0	F&G Fund Special Project Allocation
SP-454	Kusko Subsistence Surveys			$50.0	$67.0	$42.0	$70.0	50%	$0.0	$0.0	$25.0	$33.5	$21.0	$35.0	Recent F&G Fund Special Project Allocation (established SFY2009)
							Kuskokwim Subtotal		**$543.4**	**$573.6**	**$571.5**	**$592.5**	**$581.2**	**$638.1**	

Yukon River Programs

Project No.	Title	TOTAL ALLOCATION BY SFY (x1000) 2007	2008	2009	2010	2011	2012	% Associated w/ SOC	TOTAL ASSOCIATED W/SOC BY SFY (x1000) 2007	2008	2009	2010	2011	2012	Comments
FM-560	Summer Season Program Mgmnt	$338.5	$380.1	$390.0	$359.0	$492.0	$531.8	85%	$287.7	$323.1	$331.5	$305.2	$418.2	$452.0	Long term operating GF allocation
FM-561	Summer Season Fishery Monitoring	$162.5	$173.9	$0.0				85%	$138.1	$147.8	$0.0	$0.0	$0.0	$0.0	Long term operating GF allocation
FM-562	Fall Season Program Mgmnt	$466.0	$514.5	$510.3	$520.9	$513.1	$541.8	65%	$302.9	$334.4	$331.7	$338.6	$333.5	$352.2	Long term operating GF allocation
FM-563	Fall Season Fishery Monitoring	$106.1	$116.4	$112.3	$107.0	$98.1	$101.9	65%	$69.0	$75.7	$73.0	$69.6	$63.8	$66.2	Long term operating GF allocation
FM-564	Pilot Station Sonar	$0.0	$0.0	$359.3	$398.8	$0.0	$338.4	90%	$0.0	$0.0	$323.4	$358.9	$0.0	$304.6	Recent operating GF Allocation (Shifted from federal to state in SFY2009)
FM-565	Sheenjek Sonar	$0.0	$0.0	$102.6	$105.5	$110.0	$112.2	100%	$0.0	$0.0	$102.6	$105.5	$110.0	$112.2	Recent operating GF Allocation (Shifted from federal to state in SFY2009)
FM-566	Lower Yukon Summer Chum TF				$18.9	$19.3	$19.4	50%	$0.0	$0.0	$0.0	$9.5	$9.7	$9.7	Long term operating GF allocation
FM-567	Hooper Bay/Dall Point Offshore TF				$67.0	$66.8	$71.0	100%	$0.0	$0.0	$0.0	$67.0	$66.8	$71.0	Recent operating GF Allocation (Established in SFY2010)
FM-568	Lower YR TF / Stock Assessment	$0.0	$0.0	$88.7	$90.5	$91.0	$98.6	100%	$0.0	$0.0	$88.7	$90.5	$91.0	$98.6	Recent operating GF Allocation (Shifted from federal to state in SFY2009)
FM-569	Upper Yukon River Salmon	$15.0	$15.0	$15.0	$35.0	$35.0	$35.0	95%	$14.3	$14.3	$14.3	$33.3	$33.3	$33.3	Long term operating GF allocation
FM-571	Yukon River Escapement Surveys	$0.0	$0.0	$47.2	$46.0	$41.7	$42.6	90%	$0.0	$0.0	$42.5	$41.4	$37.5	$38.3	Recent operating GF Allocation (Shifted from federal to state in SFY2009)
FM-572	Yukon River Subsistence Estimation			$160.2	$194.1	$188.7	$197.9	90%	$0.0	$0.0	$144.2	$174.7	$169.8	$178.1	Recent operating GF Allocation (Shifted from federal to state in SFY2009)
FM-573	Yukon River JTC Support			$105.7	$99.6	$0.0	$101.3	100%	$0.0	$0.0	$105.7	$99.6	$0.0	$101.3	Recent operating GF Allocation (Shifted from federal to state in SFY2009)
FM-574	Yukon River TF Fall Season				$59.1	$56.8	$61.1	60%	$0.0	$0.0	$0.0	$29.6	$28.4	$30.6	Long term operating GF allocation
FM-575	Yukon River Eagle Sonar						$119.7	100%	$0.0	$0.0	$0.0	$0.0	$0.0	$119.7	Recent GF Allocation (Shifted from R&E to state in SFY2012)

CP-744	Yukon River Pilot Station Sonar Est.		$500.0				100%	$0.0	$0.0	$500.0	$0.0	$0.0	$0.0 5-year CIP Program (established SFY2009)
CP-720	Pilot Station Sonar Assessment					$250.0	90%	$0.0	$0.0	$0.0	$0.0	$0.0	$225.0 5-year CIP Program (established SFY2012)
							Yukon Subtotal	**$812.0**	**$895.2**	**$2,057.5**	**$1,723.1**	**$1,361.9**	**$2,192.7**

Norton Sound Programs

		TOTAL ALLOCATION BY SFY (x1000)						% Associated	TOTAL ASSOCIATED W/SOC BY SFY (x1000)						
Project No.	Title	2007	2008	2009	2010	2011	2012	w/ SOC	2007	2008	2009	2010	2011	2012	Comments
FM-577	Southern NS Sonar Equipment						$150.0	30%	$0.0	$0.0	$0.0	$0.0	$0.0	$45.0	Recent one-time GF Allocation (established SFY2012)
FM-578	Southern NS Salmon Assessment						$160.0	35%	$0.0	$0.0	$0.0	$0.0	$0.0	$56.0	Recent operating GF Allocation (established SFY2012)
FM-579	Norton Sound Chinook Genetics						$75.5	100%	$0.0	$0.0	$0.0	$0.0	$0.0	$75.5	Recent operating GF Allocation (established SFY2011)
FM-580	Program Management, NS Salmon	$463.6	$499.7	$465.2	$460.2	$504.4	$524.5	30%	$139.1	$149.9	$139.6	$138.1	$151.3	$157.4	Long term operating GF allocation
FM-581	Norton Sound Fishery Monitoring	$22.8	$24.7	$23.5	$38.4	$40.1	$42.6	50%	$11.4	$12.4	$11.8	$19.2	$20.1	$21.3	Long term operating GF allocation
FM-582	Unalakleet Fishery Monitoring	$54.3	$59.3	$80.2	$73.8	$75.6	$83.1	30%	$16.3	$17.8	$24.1	$22.1	$22.7	$24.9	Long term operating GF allocation
FM-583	NS Salmon Escapement Surveys	$15.6	$15.6	$15.6	$22.0	$22.0	$22.0	40%	$6.2	$6.2	$6.2	$8.8	$8.8	$8.8	Long term operating GF allocation
FM-585	Kwiniuk River Tower	$40.2	$57.1	$54.7	$58.3	$59.5	$63.4	60%	$24.1	$34.3	$32.8	$35.0	$35.7	$38.0	Long term operating GF allocation
FM-586	Norton Sound Stock Biology	$77.1	$86.1	$80.6	$85.2	$87.4	$92.0	45%	$34.7	$38.7	$36.3	$38.3	$39.3	$41.4	Long term operating GF allocation
FM-589	Nome River Weir	$32.6	$35.5	$34.7	$36.4	$37.9	$38.2	30%	$9.8	$10.7	$10.4	$10.9	$11.4	$11.5	Long term operating GF allocation
FM-591	Niukluk River Tower	$44.3	$49.5	$47.6	$49.0	$50.6	$53.6	25%	$11.1	$12.4	$11.9	$12.3	$12.7	$13.4	Long term operating GF allocation
SP-472	NS Salmon and Herring	$29.9	$37.9	$29.9	$29.9	$10.0	$45.0	30%	$9.0	$11.4	$9.0	$9.0	$3.0	$13.5	F&G Fund Special Project Allocation
							Norton Sound Subtotal		**$261.7**	**$293.7**	**$282.0**	**$293.7**	**$304.9**	**$506.7**

AYK Grand Total **$2,238.6** **$2,617.2** **$3,673.4** **$3,376.5** **$3,259.6** **$4,184.6**

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Proj#	LC		71000	71000 Other	72000	73000	74000	75000	Total	1002 FED	1003 GFM	1004 GF	1005 GFPR	1007 IA	1018 EVOS	1024 F&G	1061 CIP	1108 SPR	1109 TF
Region: 3		A-Y-K																	
Fishery Unit:	2000	A-Y-K Regional Administration																	
FM-30908	11130908	Anchorage Admin Unit	387.9	0.0	3.4	8.8	12.0	0.0	412.1	0.0	0.0	412.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-500	11130500	Program Management, AYK Region	603.1	6.9	18.1	88.6	33.4	5.0	755.1	0.0	0.0	755.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-501	11130501	Biometric Support, AYK	347.0	0.0	0.0	3.1	3.9	0.0	354.0	0.0	0.0	354.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-502	11130502	AYK Sonar Program Management	198.4	0.0	15.0	3.2	0.0	0.0	216.6	0.0	0.0	216.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-504	11130504	Regional Data Base Support	71.7	0.0	4.0	1.0	4.0	0.0	80.7	0.0	0.0	80.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TF-503	11137503	Unallocated TF Authorization	0.0	0.0	0.0	4.8	26.2	0.0	31.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31.0
Total (6 projects)			1,608.1	6.9	40.5	109.5	79.5	5.0	1,849.5	0.0	0.0	1,818.4	0.0	0.0	0.0	0.0	0.0	0.0	31.0
Fishery Unit:	2100	Kuskokwim Bay Salmon																	
FM-520	11130520	Program Management, KB Salmon	134.2	0.0	3.0	3.5	1.3	0.0	142.0	0.0	0.0	142.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-521	11130521	Fishery Monitoring, Kuskokwim Bay	18.4	0.0	0.7	2.0	2.0	0.0	23.1	0.0	0.0	23.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-522	11130522	Escapement Surveys, KBS	0.0	0.0	0.0	5.0	0.4	0.0	5.4	0.0	0.0	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-523	11130523	Goodnews River Weir	41.0	0.0	0.4	3.8	3.9	0.0	49.1	0.0	0.0	49.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (4 projects)			193.6	0.0	4.1	14.3	7.6	0.0	219.6	0.0	0.0	219.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	2290	Kuskokwim River Salmon																	
FM-540	11130540	Program Management, Kusko Area	260.6	0.0	11.0	49.0	17.8	0.0	338.4	0.0	0.0	338.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-541	11130541	Fishery Monitoring Kuskokwim Area	86.9	0.0	0.0	1.5	1.0	0.0	89.4	0.0	0.0	89.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-542	11130542	Kuskokwim River Run Assessment	159.0	0.0	6.4	5.5	11.0	0.0	181.9	0.0	0.0	181.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-543	11130543	Escapement Surveys, KRS	0.0	0.0	2.0	8.2	2.0	0.0	12.2	0.0	0.0	12.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-544	11130544	Kogrukluk River Weir	57.1	0.0	2.2	19.7	5.0	0.0	84.0	0.0	0.0	84.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-545	11130545	Aniak River Sonar	59.2	0.0	1.5	12.4	9.9	0.0	83.0	0.0	0.0	83.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-546	11130546	Kuskokwim Tagging	72.8	0.0	4.0	24.7	36.3	0.0	137.8	0.0	0.0	137.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-547	11130547	Kuskokwim R Subsist Monitoring	43.1	0.0	0.0	0.0	0.8	0.0	43.9	0.0	0.0	43.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-548	11130548	Kuskokwim Area Stock Biology	33.8	0.0	4.6	0.0	2.1	0.0	40.5	0.0	0.0	40.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-549	11130549	Kuskokwim Test Fish (GF)	48.9	0.0	0.0	5.0	2.3	0.0	56.2	0.0	0.0	56.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TF-549	11137549	Kuskokwim Test Fish	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
Total (11 projects)			821.4	0.0	31.7	126.0	90.2	0.0	1,069.3	0.0	0.0	1,067.3	0.0	0.0	0.0	0.0	0.0	0.0	2.0

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Proj#	LC		71000	71000 Other	72000	73000	74000	75000	Total	1002 FED	1003 GFM	1004 GF	1005 GFPR	1007 IA	1018 EVOS	1024 F&G	1061 CIP	1108 SPR	1109 TF
Fishery Unit:	2300	Yukon River Salmon																	
FM-560	11130560	Summer Season Program Mgmt	446.1	0.0	33.6	28.4	13.7	10.0	531.8	0.0	0.0	531.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-562	11130562	Fall Season Program Management	408.4	0.0	26.0	96.5	10.9	0.0	541.8	0.0	0.0	541.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-563	11130563	Fall Season Fishery Monitoring	78.9	0.0	2.5	10.0	10.5	0.0	101.9	0.0	0.0	101.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-564	11130564	Pilot Station Sonar	277.7	0.0	3.4	23.6	33.7	0.0	338.4	0.0	0.0	338.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-565	11130565	Sheenjek Sonar	92.5	0.0	1.6	10.0	8.1	0.0	112.2	0.0	0.0	112.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-566	11130566	Lower Yukon Summer Chum TF	12.1	0.0	0.4	2.5	4.4	0.0	19.4	0.0	0.0	19.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-567	11130567	Hooper Bay / Dall Point Offshore TF	57.3	0.0	3.2	5.6	4.9	0.0	71.0	0.0	0.0	71.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-568	11130568	Lower YR TF / Stock Assessment	75.5	0.0	0.0	7.1	16.0	0.0	98.6	0.0	0.0	98.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-569	11130569	Upper Yukon River Salmon	0.0	0.0	0.0	33.0	2.0	0.0	35.0	0.0	0.0	35.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-571	11130571	Yukon River Escapement Surveys	14.3	0.0	1.9	25.6	0.8	0.0	42.6	0.0	0.0	42.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-572	11130572	Yukon River Subsistence Estimation	157.9	0.0	19.5	16.0	4.5	0.0	197.9	0.0	0.0	197.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-573	11130573	Yukon River JTC Support	39.7	0.0	46.5	15.1	0.0	0.0	101.3	0.0	0.0	101.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-574	11130574	Yukon River Test Fish Fall Season	38.1	0.0	1.5	7.0	14.5	0.0	61.1	0.0	0.0	61.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-575	11130575	Yukon River Eagle Sonar	86.1	0.0	1.4	8.1	24.1	0.0	119.7	0.0	0.0	119.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TF-568	11137568	Yukon River Test Fish Summer Season	7.0	0.0	0.0	0.5	0.5	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0
Total (15 projects)			1,791.6	0.0	141.5	289.0	148.6	10.0	2,380.7	0.0	0.0	2,372.8	0.0	0.0	0.0	0.0	0.0	0.0	8.0
Fishery Unit:	2400	Norton Sound Salmon																	
FM-577	11130577	Southern NS Sonar Equipment	0.0	0.0	2.0	3.0	20.0	125.0	150.0	0.0	0.0	150.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-578	11130578	Southern NS Salmon Assessment	0.0	0.0	2.5	145.0	12.5	0.0	160.0	0.0	0.0	160.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-579	11130579	Norton Sound Chinook Genetics	10.5	0.0	2.0	32.0	16.0	15.0	75.5	0.0	0.0	75.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-580	11130580	Program Management, NS Salmon	456.6	0.0	15.9	36.5	8.5	0.0	527.5	0.0	0.0	527.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-581	11130581	Norton Sound Fishery Monitoring	40.9	0.0	1.2	0.3	0.2	0.0	42.6	0.0	0.0	42.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-582	11130582	Unalakleet Fishery Monitoring	66.4	0.0	4.0	6.5	6.1	0.0	83.1	0.0	0.0	83.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-583	11130583	N.S. Salmon Escapement Surveys	0.0	0.0	0.6	21.4	0.0	0.0	22.0	0.0	0.0	22.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-585	11130585	Kwiniuk River Tower	52.5	0.0	6.8	4.1	6.0	0.0	63.4	0.0	0.0	63.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-586	11130586	Norton Sound Stock Biology	83.5	0.0	1.0	2.7	2.8	0.0	92.0	0.0	0.0	92.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-589	11130589	Nome River Weir	30.9	0.0	0.0	1.0	6.3	0.0	38.2	0.0	0.0	38.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-591	11130591	Niukluk River Tower	41.6	0.0	0.8	1.0	10.2	0.0	53.6	0.0	0.0	53.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (11 projects)			794.9	0.0	30.8	253.6	88.6	140.0	1,307.9	0.0	0.0	1,307.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Proj#	LC		71000	71000 Other	72000	73000	74000	75000	Total	1002 FED	1003 GFM	1004 GF	1005 GFPR	1007 IA	1018 EVOS	1024 F&G	1061 CIP	1108 SPR	1109 TF
Fishery Unit:	2500	Kotzebue Salmon																	
FM-600	11130600	Program Mgmt - Kotzebue Salmon	0.0	0.0	3.7	17.9	2.2	0.0	23.8	0.0	0.0	23.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-601	11130601	Kotzebue Fishery Monitoring	13.5	0.0	0.4	0.7	0.5	0.0	15.1	0.0	0.0	15.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-602	11130602	Kotz Sound Escapement Surveys	0.0	0.0	0.0	6.2	0.0	0.0	6.2	0.0	0.0	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-606	11130606	Kobuk River Test Fish (GF)	24.7	0.0	3.0	3.5	3.3	0.0	34.5	0.0	0.0	34.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (4 projects)			38.2	0.0	7.1	28.3	6.0	0.0	79.6	0.0	0.0	79.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	2550	AYK Region AKSSF Match																	
FM-594	11130594	AKSSF Match - Kusko River Sockeye Sal	30.8	0.0	0.0	0.0	0.0	0.0	30.8	0.0	0.0	30.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-598	11130598	AKSSF Match - Sinuk R. Video Monitoring	15.3	0.0	0.0	0.0	0.0	0.0	15.3	0.0	0.0	15.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-608	11130608	AKSSF Match - Pilot Station Sonar	80.7	0.0	0.0	0.0	0.0	0.0	80.7	0.0	0.0	80.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (3 projects)			126.8	0.0	0.0	0.0	0.0	0.0	126.8	0.0	0.0	126.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	2600	A-Y-K Herring																	
FM-622	11130622	Norton Sound Monitoring	9.3	0.0	1.2	5.5	4.6	0.0	20.6	0.0	0.0	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (1 projects)			9.3	0.0	1.2	5.5	4.6	0.0	20.6	0.0	0.0	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	2700	Norton Sound Crab																	
FM-640	11130640	N.S. Crab Fishery Monitoring	48.1	0.0	1.6	0.5	4.7	0.0	54.9	0.0	0.0	54.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-641	11130641	Norton Sound King Crab Research	10.0	0.0	2.5	25.0	12.5	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (2 projects)			58.1	0.0	4.1	25.5	17.2	0.0	104.9	0.0	0.0	104.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	2750	Arctic/North Slope Salmon																	
FM-660	11130660	North Slope Pacific Salmon Assessment	39.5	0.0	20.8	57.0	5.7	0.0	123.0	0.0	0.0	123.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (1 projects)			39.5	0.0	20.8	57.0	5.7	0.0	123.0	0.0	0.0	123.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	4330	GF COLA Support																	
SP-2610	11330367	GF COLA Support - AYK	17.2	0.0	0.0	0.0	0.0	0.0	17.2	0.0	0.0	17.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (1 projects)			17.2	0.0	0.0	0.0	0.0	0.0	17.2	0.0	0.0	17.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Fishery Unit:	4400	Interagency Receipts																	
SP-438	11330445	Yukon River Panel & JTC Support	22.7	0.0	36.2	12.3	1.8	0.0	73.0	0.0	0.0	0.0	0.0	73.0	0.0	0.0	0.0	0.0	0.0
Total (1 projects)			22.7	0.0	36.2	12.3	1.8	0.0	73.0	0.0	0.0	0.0	0.0	73.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	4470	Commercial Crew License Fees																	
SP-454	11330454	Kusko Subsistence Surveys	49.4	0.0	13.9	5.0	1.7	0.0	70.0	0.0	0.0	0.0	70.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-471	11330335	Norton Sound King Crab - GF/PR	7.9	0.0	0.0	0.0	0.0	0.0	7.9	0.0	0.0	0.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0
SP-472	11330336	NS Salmon and Herring - GF/PR Fund	25.2	0.0	0.0	16.0	3.8	0.0	45.0	0.0	0.0	0.0	45.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-480	11330378	AYK Kusko Mark Recapture GF/PR	45.0	0.0	0.0	0.0	0.0	0.0	45.0	0.0	0.0	0.0	45.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (4 projects)			127.5	0.0	13.9	21.0	5.5	0.0	167.9	0.0	0.0	0.0	167.9	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	4500	Statutory Program Receipts																	
SP-507	11330373	YRP R&E Baseline Samples 78-11	0.0	0.0	0.0	30.0	0.0	0.0	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0
SP-543	11330370	YRP R&E Temperature Monitoring	0.0	0.0	3.9	0.0	1.0	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	0.0
SP-545	11330375	YRP/NF Science & Salmon Educ Outreach	2.0	0.0	4.0	0.7	0.0	0.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	0.0
SP-569		NPRB NS Red King Crab Movement	0.0	0.0	2.3	7.7	65.0	0.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	75.0	0.0
Total (4 projects)			2.0	0.0	10.2	38.4	66.0	0.0	116.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	116.6	0.0
Fishery Unit:	4850	Bering Sea Crab Research																	
SP-853	11330374	Norton Sound Red King Crab Trawl Surve	39.8	0.0	0.8	105.0	0.0	0.0	145.6	145.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (1 projects)			39.8	0.0	0.8	105.0	0.0	0.0	145.6	145.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Fishery Unit:	5100	Federal Subsistence Projects																	
SP-111	11330353	OSM Kusko Inseason Subs Catch Monitori	15.9	0.0	0.0	10.5	0.0	0.0	26.4	26.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-112	11330354	OSM Inseason Support	26.4	0.0	14.6	4.8	0.8	0.0	46.6	46.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-115	11330334	OSM Unalakleet River Chinook Salmon	28.7	0.0	1.7	41.5	7.8	0.0	79.7	79.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-117	11330344	OSM Kanektok & Goodnews River Salmon	118.6	0.0	2.0	9.7	9.1	0.0	139.4	139.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-122	11330455	R&M Sheenjek River Chinook Genetic Sa	0.0	0.0	0.0	12.7	3.5	0.0	16.2	16.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-128	11330355	R&M Yukon Delta Bering Cisco Harvest	5.9	0.0	0.0	0.0	0.0	0.0	5.9	5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-129	11330343	OSM Kusko Salmon ASL Assessment	103.0	0.0	1.0	0.7	0.0	0.0	104.7	104.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-137	11330352	OSM Tatlawiksuk River Weir Continuation	69.5	0.0	1.5	71.3	19.7	0.0	162.0	162.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-138	11330459	OSM ASL Subsistence Chinook Harvest	62.2	0.0	0.2	45.5	3.9	0.0	111.8	111.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-152	11330464	OSM Anvik River Sonar	28.6	0.0	0.7	3.0	2.6	0.0	34.9	34.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-153	11330372	R&M Pilot Station Extended Ops	38.5	0.0	0.0	0.0	4.6	0.0	43.1	43.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-157	11330460	OSM George River Salmon Weir	70.6	0.0	1.4	38.4	19.0	0.0	129.4	129.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-158	11330641	OSM Takotna River Weir	91.6	0.0	1.2	5.0	6.9	0.0	104.7	104.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-161	11330345	OSM Kuskokwim Post Season Surveys	45.7	0.0	0.0	46.6	0.0	0.0	92.3	92.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-162	11330362	OSM Yukon River Run Reconstruction	3.7	0.0	2.6	0.0	0.0	0.0	6.3	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (15 projects)			708.9	0.0	26.9	289.7	77.9	0.0	1,103.4	1,103.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	5175	Treaty Implementation																	
SP-1001	11330475	TI Border Sonar	65.0	0.0	1.4	16.9	10.8	0.0	94.1	94.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-1003	11330474	TI Lower Yukon Monitoring	79.3	0.0	6.5	13.5	23.0	0.0	122.3	122.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-1005	11330476	TI Yukon River Stock Biology	97.6	0.0	4.0	6.8	5.7	0.0	114.1	114.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (3 projects)			241.9	0.0	11.9	37.2	39.5	0.0	330.5	330.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	5300	Shellfish/Groundfish Projects																	
SP-2202	11330434	Norton Sound Trawl Survey	44.4	0.0	2.0	3.0	3.6	0.0	53.0	0.0	0.0	53.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (1 projects)			44.4	0.0	2.0	3.0	3.6	0.0	53.0	0.0	0.0	53.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Fishery Unit:	5305	Fish/Wildlife Careers For Alaskans																	
SP-3121	11330441	FWCA Nome Apprentice	3.5	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-3122	11330442	FWCA Bethel Apprentice	3.9	0.0	0.0	0.0	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (2 projects)			7.4	0.0	0.0	0.0	0.0	0.0	7.4	0.0	0.0	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	5600	CIP Positions																	
CP-720	11339003	Pilot Station Sonar Assessment	27.3	0.0	0.0	0.0	0.0	0.0	27.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.3	0.0	0.0
CP-721	11339048	Assess of Pacific Salmon Resource in AYK	47.7	0.0	0.0	0.0	0.0	0.0	47.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.7	0.0	0.0
CP-726	11144610	Video Monitoring Salmon in Sinuk River	5.5	0.0	0.0	0.0	0.0	0.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	0.0	0.0
CP-783	11144519	Pilot Station Sonar Acoustic Tags	38.1	0.0	0.0	0.0	0.0	0.0	38.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.1	0.0	0.0
CP-807	11145920	Kuskokwim River Sockeye Salmon	38.4	0.0	0.0	0.0	0.0	0.0	38.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.4	0.0	0.0
CP-823	11144508	Kuskokwim Chum Tagging Effects	4.2	0.0	0.0	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	0.0
Total (6 projects)			161.2	0.0	0.0	0.0	0.0	0.0	161.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	161.2	0.0	0.0
Totals for Region: 3		(96 projects)	6,854.5	6.9	383.7	1,415.3	642.3	155.0	9,457.7	1,579.4	0.0	7,318.5	167.9	73.0	0.0	0.0	161.2	116.6	41.0
Report Totals			6,854.5	6.9	383.7	1,415.3	642.3	155.0	9,457.7	1,579.4	0.0	7,318.5	167.9	73.0	0.0	0.0	161.2	116.6	41.0

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Region: 3		A-Y-K																	
Fishery Unit:	2000	A-Y-K Regional Administration																	
FM-30908	11130908	Anchorage Admin Unit	380.0	0.0	3.4	8.8	12.0	0.0	404.2	0.0	0.0	404.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-500	11130500	Program Management, AYK Region	622.5	6.9	67.9	152.0	171.9	101.2	1,122.4	0.0	0.0	1,122.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-501	11130501	Biometric Support, AYK	320.0	0.0	0.0	3.1	3.9	0.0	327.0	0.0	0.0	327.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-502	11130502	AYK Sonar Program Management	218.2	0.0	0.0	18.2	0.0	0.0	236.4	0.0	0.0	236.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-504	11130504	Regional Data Base Support	71.0	0.0	4.0	1.0	4.0	0.0	80.0	0.0	0.0	80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TF-503	11137503	Unallocated TF Authorization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (6 projects)			1,611.7	6.9	75.3	183.1	191.8	101.2	2,170.0	0.0	0.0	2,170.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	2100	Kuskokwim Bay Salmon																	
FM-520	11130520	Program Management, KB Salmon	103.1	0.0	3.0	3.5	1.3	0.0	110.9	0.0	0.0	110.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-521	11130521	Fishery Monitoring, Kuskokwim Bay	17.0	0.0	0.7	2.0	2.0	0.0	21.7	0.0	0.0	21.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-522	11130522	Escapement Surveys, KBS	0.0	0.0	0.0	5.0	0.4	0.0	5.4	0.0	0.0	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-523	11130523	Goodnews River Weir	37.3	0.0	0.4	3.8	3.9	0.0	45.4	0.0	0.0	45.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (4 projects)			157.4	0.0	4.1	14.3	7.6	0.0	183.4	0.0	0.0	183.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	2200	Kuskokwim River Salmon																	
FM-540	11130540	Program Management, Kusko Area	262.3	0.0	11.0	49.0	17.8	0.0	340.1	0.0	0.0	340.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-541	11130541	Fishery Monitoring Kuskokwim Area	80.2	0.0	0.0	1.5	1.0	0.0	82.7	0.0	0.0	82.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-542	11130542	Kuskokwim River Run Assessment	118.6	0.0	6.4	5.5	11.0	0.0	141.5	0.0	0.0	141.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-543	11130543	Escapement Surveys, KRS	0.0	0.0	2.0	8.2	2.0	0.0	12.2	0.0	0.0	12.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-544	11130544	Kogrukluk River Weir	52.2	0.0	2.2	19.7	5.0	0.0	79.1	0.0	0.0	79.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-545	11130545	Aniak River Sonar	52.7	0.0	1.5	12.4	9.9	0.0	76.5	0.0	0.0	76.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-546	11130546	Kuskokwim Tagging	76.7	0.0	4.0	24.7	36.3	0.0	141.7	0.0	0.0	141.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-547	11130547	Kuskokwim R Subsist Monitoring	40.6	0.0	0.0	0.0	0.8	0.0	41.4	0.0	0.0	41.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-548	11130548	Kuskokwim Area Stock Biology	18.5	0.0	4.6	0.0	2.1	0.0	25.2	0.0	0.0	25.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-549	11130549	Kuskokwim Test Fish (GF)	45.6	0.0	0.0	5.0	2.3	0.0	52.9	0.0	0.0	52.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TF-549	11137549	Kuskokwim Test Fish	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
Total (11 projects)			747.4	0.0	31.7	126.0	90.2	0.0	995.3	0.0	0.0	993.2	0.0	0.0	0.0	0.0	0.0	0.0	2.0

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Fishery Unit:	2300	Yukon River Salmon																	
FM-560	11130560	Summer Season Program Mgmt	411.4	0.0	28.5	28.4	13.7	10.0	492.0	0.0	0.0	492.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-562	11130562	Fall Season Program Management	379.7	0.0	26.0	96.5	10.9	0.0	513.1	0.0	0.0	513.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-563	11130563	Fall Season Fishery Monitoring	75.1	0.0	2.5	10.0	10.5	0.0	98.1	0.0	0.0	98.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-564	11130564	Pilot Station Sonar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-565	11130565	Sheenjek Sonar	99.3	0.0	1.6	10.0	8.1	0.0	110.0	0.0	0.0	110.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-566	11130566	Lower Yukon Summer Chum TF	12.0	0.0	0.4	2.5	4.4	0.0	19.3	0.0	0.0	19.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-567	11130567	Hooper Bay / Dall Point Offshore TF	53.1	0.0	3.2	5.6	4.9	0.0	66.8	0.0	0.0	66.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-568	11130568	Lower YR TF / Stock Assessment	67.9	0.0	0.0	7.1	16.0	0.0	91.0	0.0	0.0	91.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-569	11130569	Upper Yukon River Salmon	0.0	0.0	0.0	33.0	2.0	0.0	35.0	0.0	0.0	35.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-571	11130571	Yukon River Escapement Surveys	13.4	0.0	1.9	25.6	0.8	0.0	41.7	0.0	0.0	41.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-572	11130572	Yukon River Subsistence Estimation	148.7	0.0	19.5	16.0	4.5	0.0	188.7	0.0	0.0	188.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-573	11130573	Yukon River JTC Support	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-574	11130574	Yukon River Test Fish Fall Season	33.8	0.0	1.5	7.0	14.5	0.0	56.8	0.0	0.0	56.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TF-568	11137568	Yukon River Test Fish Summer Season	6.3	0.0	0.0	5.3	26.7	0.0	38.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.3
Total (14 projects)			1,291.7	0.0	85.1	247.0	117.0	10.0	1,750.8	0.0	0.0	1,712.5	0.0	0.0	0.0	0.0	0.0	0.0	38.3
Fishery Unit:	2400	Norton Sound Salmon																	
FM-579	11130579	Norton Sound Chinook Genetics	10.0	0.0	2.0	32.0	16.0	15.0	75.0	0.0	0.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-580	11130580	Program Management, NS Salmon	443.5	0.0	15.9	36.5	8.5	0.0	504.4	0.0	0.0	504.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-581	11130581	Norton Sound Fishery Monitoring	38.4	0.0	1.2	0.3	0.2	0.0	40.1	0.0	0.0	40.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-582	11130582	Unalakleet Fishery Monitoring	58.9	0.0	4.0	8.6	6.1	0.0	75.6	0.0	0.0	75.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-583	11130583	N.S. Salmon Escapement Surveys	0.0	0.0	0.6	21.4	0.0	0.0	22.0	0.0	0.0	22.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-585	11130585	Kwiniuk River Tower	48.6	0.0	0.8	4.1	6.0	0.0	59.5	0.0	0.0	59.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-586	11130586	Norton Sound Stock Biology	80.9	0.0	1.0	2.7	2.8	0.0	87.4	0.0	0.0	87.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-589	11130589	Nome River Weir	30.6	0.0	0.0	1.0	6.3	0.0	37.9	0.0	0.0	37.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-591	11130591	Niukluk River Tower	38.6	0.0	0.8	1.0	10.2	0.0	50.6	0.0	0.0	50.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (9 projects)			749.5	0.0	26.3	105.6	56.1	15.0	952.5	0.0	0.0	952.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Fishery Unit:	2500	Kotzebue Salmon																	
FM-600	11130600	Program Mgmt - Kotzebue Salmon	0.0	0.0	3.7	17.9	2.2	0.0	23.8	0.0	0.0	23.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-601	11130601	Kotzebue Fishery Monitoring	12.3	0.0	0.4	0.7	0.5	0.0	13.9	0.0	0.0	13.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-602	11130602	Kotz Sound Escapement Surveys	0.0	0.0	0.0	6.2	0.0	0.0	6.2	0.0	0.0	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-606	11130606	Kobuk River Test Fish (GF)	23.9	0.0	3.0	3.5	3.3	0.0	33.7	0.0	0.0	33.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (4 projects)			36.2	0.0	7.1	28.3	6.0	0.0	77.6	0.0	0.0	77.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	2550	AYK Region AKSSF Match																	
FM-594	11130594	AKSSF Match - Kusko River Sockeye Sal	27.3	0.0	0.0	0.0	0.0	0.0	27.3	0.0	0.0	27.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-607	11130607	AKSSF Match - Kusko Chum Tagging	6.1	0.0	0.0	0.0	0.0	0.0	6.1	0.0	0.0	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-608	11130608	AKSSF Match - Pilot Station Sonar	81.8	0.0	4.3	0.0	11.0	0.0	97.1	0.0	0.0	97.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (3 projects)			115.2	0.0	4.3	0.0	11.0	0.0	130.5	0.0	0.0	130.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	2600	A-Y-K Herring																	
FM-620	11130620	Kuskokwim Monitoring	33.4	0.0	6.3	0.7	4.8	0.0	45.2	0.0	0.0	45.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-621	11130621	Cape Romanzof Monitoring	19.3	0.0	0.6	4.8	5.0	0.0	29.1	0.0	0.0	29.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-622	11130622	Norton Sound Monitoring	8.8	0.0	1.2	5.5	4.6	0.0	20.1	0.0	0.0	20.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-623	11130623	Kuskokwim Aerial Surveys	0.0	0.0	0.0	15.8	0.7	0.0	16.5	0.0	0.0	16.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-624	11130624	Norton Sound Aerial Surveys	0.0	0.0	0.0	13.5	0.0	0.0	13.5	0.0	0.0	13.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (5 projects)			61.5	0.0	7.5	40.3	15.1	0.0	124.4	0.0	0.0	124.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	2700	Norton Sound Crab																	
FM-640	11130640	N.S. Crab Fishery Monitoring	45.1	0.0	1.6	0.5	4.7	0.0	51.9	0.0	0.0	51.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (1 projects)			45.1	0.0	1.6	0.5	4.7	0.0	51.9	0.0	0.0	51.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	2750	Arctic/North Slope Salmon																	
FM-660	11130660	North Slope Pacific Salmon Assessment	43.8	0.0	20.8	57.0	5.7	0.0	127.3	0.0	0.0	127.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (1 projects)			43.8	0.0	20.8	57.0	5.7	0.0	127.3	0.0	0.0	127.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Fishery Unit:	4400	Interagency Receipts																	
SP-450	11330445	Yukon River Panel & JTC Support	21.2	0.0	36.2	12.3	1.8	0.0	71.5	0.0	0.0	0.0	0.0	71.5	0.0	0.0	0.0	0.0	0.0
Total (1 projects)			21.2	0.0	36.2	12.3	1.8	0.0	71.5	0.0	0.0	0.0	0.0	71.5	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	4450	Fish & Game Fund																	
SP-454	11330454	Kusko Subsistence Survey's F&G Fund	19.2	0.0	17.3	4.5	1.0	0.0	42.0	0.0	0.0	0.0	42.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (1 projects)			19.2	0.0	17.3	4.5	1.0	0.0	42.0	0.0	0.0	0.0	42.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	4470	Commercial Crew License Fees																	
SP-471	11330335	Norton Sound King Crab - F&G Fund	7.9	0.0	0.0	0.0	0.0	0.0	7.9	0.0	0.0	0.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0
SP-472	11330336	NS Salmon and Herring - F&G Fund	10.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-480	11330378	AYK Kusko Mark Recapture F&G Fund	45.0	0.0	0.0	0.0	0.0	0.0	45.0	0.0	0.0	0.0	45.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (3 projects)			62.9	0.0	0.0	0.0	0.0	0.0	62.9	0.0	0.0	0.0	63.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	4500	Statutory Program Receipts																	
SP-505	11330346	YRP R&E Eagle Sonar/ASL	85.6	0.0	1.4	8.1	24.1	0.0	119.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	119.2	0.0
SP-506	11330357	YRP CRE Chinook ASL	0.0	0.0	0.0	0.0	1.7	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0
SP-543	11330356	YRP R&E Temperature Monitoring	0.0	0.0	4.2	0.0	0.8	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
Total (3 projects)			85.6	0.0	5.6	8.1	26.6	0.0	125.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	125.9	0.0
Fishery Unit:	4600	Miscellaneous Federal Projects																	
SP-154		RM Pilot Station Exploratory Testfishing	2.9	0.0	0.0	0.0	0.7	0.0	3.6	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-155		RM Anvik Sonar Site Relocation	3.2	0.0	1.8	0.0	2.4	0.0	7.4	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (2 projects)			6.1	0.0	1.8	0.0	3.1	0.0	11.0	10.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	4800	US/Canada - Region 3																	
SP-810	11330359	JTC & Yukon Projects Support	38.6	0.0	32.8	29.7	0.0	0.0	101.1	101.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-817	11330361	YR Sonar at Pilot Station	267.1	0.0	3.9	31.7	34.3	0.0	337.0	337.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (2 projects)			305.7	0.0	36.7	61.4	34.3	0.0	438.1	438.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Fishery Unit:	5100	Federal Subsistence Projects																	
SP-111	11330353	OSM Kusko Inseason Subs Catch Monitori	14.9	0.0	0.0	18.1	0.0	0.0	33.0	33.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-112	11330354	OSM Inseason Support	19.4	0.0	14.6	4.8	0.8	0.0	39.6	39.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-115	11330334	OSM Unalakleet River Chinook Salmon	32.5	0.0	1.7	0.0	7.8	0.0	42.0	42.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-117	11330344	OSM Kanektok & Goodnews River Salmon	85.2	0.0	2.0	9.7	9.1	0.0	106.0	106.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-122	11330455	R&M Sheenjek River Chinook Genetic Sa	0.0	0.0	0.0	12.7	3.5	0.0	16.2	16.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-128	11330355	Yukon Delta Bering Cisco Harvest	4.2	0.0	0.0	0.0	0.0	0.0	4.2	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-129	11330343	OSM Kusko Salmon ASL Assessment	97.4	0.0	0.8	0.7	0.0	0.0	98.9	98.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-137	11330352	OSM Tatlawiksuk River Weir Continuation	72.0	0.0	0.9	3.9	18.1	0.0	94.9	94.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-138	11330459	OSM ASL Subsistence Chinook Harvest	57.2	0.0	0.2	1.1	1.1	0.0	59.6	59.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-152	11330464	OSM Anvik River Sonar	32.9	0.0	1.6	5.1	4.4	0.0	44.0	44.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-153	11330486	R&M Pilot Station Extended Ops	34.8	0.0	0.0	0.0	4.3	0.0	39.1	39.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-157	11330460	OSM George River Salmon Weir	73.8	0.0	1.4	38.4	19.0	0.0	132.6	132.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-158	11330641	OSM Takotna River Weir	36.7	0.0	1.7	0.4	2.0	0.0	40.8	40.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-161	11330345	OSM Kuskokwim Post Season Surveys	42.7	0.0	0.0	60.1	0.0	0.0	102.8	102.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-162	11330362	OSM Yukon River Run Reconstruction	19.4	0.0	4.3	0.0	0.0	0.0	23.7	23.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (15 projects)			623.1	0.0	29.2	155.0	76.1	0.0	877.4	877.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	5175	Treaty Implementation																	
SP-1001	11330475	TI Border Sonar	74.9	0.0	1.4	16.9	10.8	0.0	104.0	104.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-1003	11330474	TI Lower Yukon Monitoring	84.3	0.0	6.5	13.5	23.0	0.0	127.3	127.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-1005	11330476	TI Yukon River Stock Biology	98.5	0.0	4.0	6.8	5.7	0.0	115.0	115.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (3 projects)			257.7	0.0	11.9	37.2	39.5	0.0	346.3	346.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	5300	Shellfish/Groundfish Projects																	
SP-2202	11330434	Norton Sound Trawl Survey	41.4	0.0	2.0	3.0	3.6	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (1 projects)			41.4	0.0	2.0	3.0	3.6	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Fishery Unit:	5305	Fish/Wildlife Careers For Alaskans																	
SP-3121	11330441	FWCA Nome Apprentice	3.5	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-3122	11330442	FWCA Bethel Apprentice	3.5	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (2 projects)			7.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	5600	CIP Positions																	
CP-721	11339048	Assess of Pacific Salmon Resource in AYK	48.5	0.0	0.0	0.0	0.0	0.0	48.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.5	0.0	0.0
CP-725	11145126	Biological Sampling of Yukon Salmon	3.6	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0
CP-727	11145125	Kusko River Coho Genetics	13.0	0.0	0.0	0.0	0.0	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.0	0.0	0.0
CP-732	11145716	Kuskokwim River Coho, Ph 3 of 3	6.9	0.0	0.0	0.0	0.0	0.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	0.0	0.0
CP-744	11339043	Yukon River Pilot Station Sonar Est.	85.7	0.0	0.0	0.0	0.0	0.0	85.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	85.7	0.0	0.0
CP-783	11144519	Pilot Station Sonar Acoustic Tags	22.4	0.0	0.0	0.0	0.0	0.0	22.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.4	0.0	0.0
CP-807	11145920	Kuskokwim River Sockeye Salmon	46.2	0.0	0.0	0.0	0.0	0.0	46.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.2	0.0	0.0
CP-823	11144508	Kuskokwim Chum Tagging Effects	5.3	0.0	0.0	0.0	0.0	0.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	0.0	0.0
Total (8 projects)			231.6	0.0	0.0	0.0	0.0	0.0	231.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	231.5	0.0	0.0
Totals for Region: 3		(99 projects)	6,521.0	6.9	404.5	1,083.6	685.2	126.2	8,827.4	1,672.7	0.0	6,580.3	104.9	71.5	0.0	0.0	231.5	125.9	40.3
Report Totals			6,521.0	6.9	404.5	1,083.6	685.2	126.2	8,827.4	1,672.7	0.0	6,580.3	104.9	71.5	0.0	0.0	231.5	125.9	40.3

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Region:3	A-Y-K																		
Fishery Unit:	2000	A-Y-K Regional Administration																	
FM-30908	11130908	Anchorage Admin Unit	371.7	0.0	6.0	6.2	12.0	0.0	395.9	0.0	0.0	395.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-500	11130500	Program Management, AYK Region	437.9	0.0	31.0	65.2	32.8	7.0	573.9	0.0	0.0	455.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-501	11130501	Biometric Support, AYK	316.9	0.0	0.0	3.1	3.9	0.0	323.9	0.0	0.0	315.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-502	11130502	AYK Sonar Program Management	228.4	0.0	0.0	18.2	0.0	0.0	246.6	0.0	0.0	230.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TF-503	11137503	Unallocated TF Authorization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (5 projects)			1,354.9	0.0	37.0	92.7	48.7	7.0	1,540.3	0.0	0.0	1,396.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	2100	Kuskokwim Bay Salmon																	
FM-520	11130520	Program Management, KB Salmon	117.7	0.0	3.0	3.5	1.3	0.0	125.5	0.0	0.0	106.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-521	11130521	Fishery Monitoring, Kuskokwim Bay	16.0	0.0	0.7	2.0	2.0	0.0	20.7	0.0	0.0	20.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-522	11130522	Escapement Surveys, KBS	0.0	0.0	0.0	5.0	0.4	0.0	5.4	0.0	0.0	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-523	11130523	Goodnews River Weir	36.3	0.0	0.4	3.8	3.9	0.0	44.4	0.0	0.0	44.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (4 projects)			170.0	0.0	4.1	14.3	7.6	0.0	196.0	0.0	0.0	177.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	2200	Kuskokwim River Salmon																	
FM-540	11130540	Program Management, Kusko Area	232.8	0.0	11.0	49.0	17.8	0.0	310.6	0.0	0.0	294.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-541	11130541	Fishery Monitoring Kuskokwim Area	80.7	0.0	0.0	1.5	1.0	0.0	83.2	0.0	0.0	83.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-542	11130542	Kuskokwim Rives Run Assessment	132.6	0.0	6.4	5.5	11.0	0.0	155.5	0.0	0.0	155.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-543	11130543	Escapement Surveys, KRS	0.0	0.0	2.0	8.2	2.0	0.0	12.2	0.0	0.0	12.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-544	11130544	Kogruktuk River Weir	48.4	0.0	2.2	19.7	5.0	0.0	75.3	0.0	0.0	75.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-545	11130545	Aniak River Sonar	50.9	0.0	1.5	12.4	9.9	0.0	74.7	0.0	0.0	74.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-546	11130546	Kuskokwim Tagging	79.1	0.0	4.0	24.7	36.3	0.0	144.1	0.0	0.0	144.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-547	11130547	Kuskokwim R Subsist Monitoring	39.2	0.0	0.0	0.0	0.8	0.0	40.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-548	11130548	Kuskokwim Area Stock Biology	33.7	0.0	4.6	0.0	2.1	0.0	40.4	0.0	0.0	40.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-549	11130549	Kuskokwim Test Fish (GF)	43.7	0.0	0.0	5.0	2.3	0.0	51.0	0.0	0.0	51.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TF-549	11137549	Kuskokwim Test Fish	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
Total (11 projects)			741.1	0.0	31.7	126.0	90.2	0.0	989.0	0.0	0.0	970.8	0.0	0.0	0.0	0.0	0.0	0.0	2.0

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Fishery Unit:	2300	Yukon River Salmon																	
FM-560	11130560	Summer Season Program Mgmt	305.1	0.0	25.8	25.0	3.1	0.0	359.0	0.0	0.0	324.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-562	11130562	Fall Season Program Management	387.5	0.0	26.0	96.5	10.9	0.0	520.9	0.0	0.0	449.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-563	11130563	Fall Season Fishery Monitoring	84.0	0.0	2.5	10.0	10.5	0.0	107.0	0.0	0.0	107.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-564	11130564	Pilot Station Sonar	328.4	0.0	3.9	28.6	37.9	0.0	398.8	0.0	0.0	398.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-565	11130565	Sheenjek Sonar	85.8	0.0	1.6	10.0	8.1	0.0	105.5	0.0	0.0	105.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-566	11130566	Lower Yukon Summer Chum TF	11.6	0.0	0.4	2.5	4.4	0.0	18.9	0.0	0.0	18.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-567	11130567	Hooper Bay / Dall Point Offshore TF	53.3	0.0	3.2	5.6	4.9	0.0	67.0	0.0	0.0	67.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-568	11130568	Lower YR TF / Stock Assessment	67.4	0.0	0.0	7.1	16.0	0.0	90.5	0.0	0.0	90.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-569	11130569	Upper Yukon River Salmon	0.0	0.0	0.0	33.0	2.0	0.0	35.0	0.0	0.0	35.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-571	11130571	Yukon River Escapement Surveys	17.7	0.0	1.9	25.6	0.8	0.0	46.0	0.0	0.0	46.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-572	11130572	Yukon River Subsistence Estimation	164.1	0.0	19.5	16.0	4.5	0.0	194.1	0.0	0.0	194.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-573	11130573	Yukon River JTC Support	38.6	0.0	46.0	15.0	0.0	0.0	99.6	0.0	0.0	99.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-574	11130574	Yukon River Test Fish Fall Season	36.1	0.0	1.5	7.0	14.5	0.0	59.1	0.0	0.0	59.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TF-568	11137568	Yukon River Test Fish Summer Season	10.7	0.0	0.0	9.5	50.0	0.0	70.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	70.2
Total (14 projects)			1,589.3	0.0	132.3	291.4	167.6	0.0	2,171.6	0.0	0.0	1,995.4	0.0	0.0	0.0	0.0	0.0	0.0	70.2
Fishery Unit:	2400	Norton Sound Salmon																	
FM-580	11130580	Program Management, NS Salmon	399.3	0.0	15.9	36.5	8.5	0.0	460.2	0.0	0.0	460.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-581	11130581	Norton Sound Fishery Monitoring	36.7	0.0	1.2	0.3	0.2	0.0	38.4	0.0	0.0	38.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-582	11130582	Unalakleet Fishery Monitoring	57.1	0.0	4.0	6.6	6.1	0.0	73.8	0.0	0.0	73.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-583	11130583	N.S. Salmon Escapement Surveys	0.0	0.0	0.6	21.4	0.0	0.0	22.0	0.0	0.0	22.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-585	11130585	Kwiniuk River Tower	47.4	0.0	0.8	4.1	6.0	0.0	58.3	0.0	0.0	58.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-586	11130586	Norton Sound Stock Biology	78.7	0.0	1.0	2.7	2.8	0.0	85.2	0.0	0.0	85.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-589	11130589	Nome River Weir	29.1	0.0	0.0	1.0	6.3	0.0	36.4	0.0	0.0	36.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-591	11130591	Niukluk River Tower	37.0	0.0	0.8	1.0	10.2	0.0	49.0	0.0	0.0	49.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (8 projects)			685.3	0.0	24.3	73.6	40.1	0.0	823.3	0.0	0.0	823.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Fishery Unit:	2500	Kotzebue Salmon																	
FM-600	11130600	Program Mgmt - Kotzebue Salmon	0.0	0.0	3.7	17.9	2.2	0.0	23.8	0.0	0.0	23.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-601	11130601	Kotzebue Fishery Monitoring	11.8	0.0	0.4	0.7	0.5	0.0	13.4	0.0	0.0	13.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-602	11130602	Kotz Sound Escapement Surveys	0.0	0.0	0.0	6.2	0.0	0.0	6.2	0.0	0.0	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-606	11130606	Kobuk River Test Fish (GF)	23.2	0.0	3.0	3.5	3.3	0.0	33.0	0.0	0.0	33.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (4 projects)			35.0	0.0	7.1	28.3	6.0	0.0	76.4	0.0	0.0	76.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	2550	AYK Region AKSSF Match																	
FM-594	11130594	AKSSF Match - Kusko River Sockeye Sal	10.7	0.0	0.0	0.0	0.0	0.0	10.7	0.0	0.0	10.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (1 projects)			10.7	0.0	0.0	0.0	0.0	0.0	10.7	0.0	0.0	10.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	2600	A-Y-K Herring																	
FM-620	11130620	Kuskokwim Monitoring	32.2	0.0	6.3	0.7	4.8	0.0	44.0	0.0	0.0	44.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-621	11130621	Cape Romanzof Monitoring	18.6	0.0	0.0	4.8	5.0	0.0	28.4	0.0	0.0	28.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-622	11130622	Norton Sound Monitoring	8.5	0.0	1.2	5.5	4.6	0.0	19.8	0.0	0.0	19.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-623	11130623	Kuskokwim Aerial Surveys	0.0	0.0	0.0	15.8	0.7	0.0	16.5	0.0	0.0	16.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-624	11130624	Norton Sound Aerial Surveys	0.0	0.0	0.0	13.5	0.0	0.0	13.5	0.0	0.0	13.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (5 projects)			59.3	0.0	7.5	40.3	15.1	0.0	122.2	0.0	0.0	122.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	2700	Norton Sound Crab																	
FM-640	11130640	N.S. Crab Fishery Monitoring	43.0	0.0	1.6	0.5	4.7	0.0	49.8	0.0	0.0	49.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (1 projects)			43.0	0.0	1.6	0.5	4.7	0.0	49.8	0.0	0.0	49.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	2750	Arctic/North Slope Salmon																	
FM-660	11130660	North Slope Pacific Salmon Assessment	41.4	0.0	20.8	57.0	5.7	0.0	124.9	0.0	0.0	124.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (1 projects)			41.4	0.0	20.8	57.0	5.7	0.0	124.9	0.0	0.0	124.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Fishery Unit:	4400	Interagency Receipts																	
SP-203		NPRB Differentiation of Chum Salmon	0.0	0.0	0.0	0.0	6.0	0.0	6.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0
SP-450	11330445	Yukon River Panel & JTC Support	20.0	0.0	36.2	12.3	1.8	0.0	70.3	0.0	0.0	0.0	0.0	70.3	0.0	0.0	0.0	0.0	0.0
Total (2 projects)			20.0	0.0	36.2	12.3	7.8	0.0	76.3	0.0	0.0	0.0	0.0	76.3	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	4450	Fish & Game Fund																	
SP-454	11330454	Kusko Subsistence Survey's F&G Fund	56.5	0.0	4.9	0.0	5.6	0.0	67.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (1 projects)			56.5	0.0	4.9	0.0	5.6	0.0	67.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	4470	Commercial Crew License Fees																	
SP-471	11330335	Norton Sound King Crab - F&G Fund	7.9	0.0	0.0	0.0	0.0	0.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-472	11330336	NS Salmon and Herring - F&G Fund	25.2	0.0	0.0	0.9	3.8	0.0	29.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-480	11330378	AYK Kusko Mark Recapture F&G Fund	45.0	0.0	0.0	0.0	0.0	0.0	45.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (3 projects)			78.1	0.0	0.0	0.9	3.8	0.0	82.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	4500	Statutory Program Receipts																	
SP-505	11330483	YRP R&E Eagle Sonar & ASL Selections	83.6	0.0	1.5	8.2	25.8	0.0	119.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	119.1	0.0
SP-517	11330452	YDFDA Yukon River Mesh Size Study	13.9	0.0	0.0	0.0	0.3	0.0	14.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.2	0.0
SP-520	11330484	YPR R&E Radio Tower Retrieval	0.0	0.0	3.4	11.8	2.8	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.0	0.0
SP-524	11330480	YRP R&E Eagle Sonar ASL	10.5	0.0	0.0	0.0	7.1	0.0	17.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.7	0.0
SP-544	11330469	YRP R&E Baseline DNA Samples	0.0	0.0	2.0	52.0	6.0	0.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.0	0.0
SP-570	11330472	YRP R&E Yukon Chinook Inseason GSI	22.5	0.0	0.0	2.4	5.8	0.0	30.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.7	0.0
Total (6 projects)			130.6	0.0	6.9	74.4	47.8	0.0	259.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	259.7	0.0
Fishery Unit:	4600	Miscellaneous Federal Projects																	
SP-613	11330478	R&M Tanana Fall Video 09-08	0.0	0.0	0.0	21.0	0.0	0.0	21.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-616	11330471	R&M Pilot Station Extended Ops	15.7	0.0	0.0	0.0	2.2	0.0	17.9	17.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (2 projects)			15.7	0.0	0.0	21.0	2.2	0.0	38.9	38.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Fishery Unit:	5100	Federal Subsistence Projects																	
SP-111	11330431	OSM Inseason Monitoring	12.1	0.0	0.0	2.3	0.0	0.0	14.4	14.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-112	11330432	OSM Inseason Support	16.0	0.0	6.7	6.9	0.0	0.0	29.6	29.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-118	11330448	OSM Lower Yukon Drift Test Fish	29.1	0.0	1.3	0.0	14.1	0.0	44.5	44.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-124	11330449	OSM Kanektok & Goodnews River Salmon	67.8	0.0	1.2	5.7	8.5	0.0	83.2	83.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-129	11330444	OSM Kusko Salmon ASL Assessment	128.7	0.0	0.5	0.7	0.0	0.0	129.9	129.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-137	11330451	OSM Tatlawiksuk River Weir Continuation	74.2	0.0	6.2	7.7	13.4	0.0	101.5	101.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-138	11330459	OSM ASL Subsistence Chinook Harvest	57.1	0.0	2.7	37.9	2.6	0.0	100.3	100.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-152	11330464	OSM Anvik River Sonar	30.0	0.0	0.4	4.3	3.1	0.0	37.8	37.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-157	11330460	OSM George River Salmon Weir	135.7	0.0	1.7	35.5	20.9	0.0	193.8	193.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-158	11330641	OSM Takotna River Weir	88.6	0.0	2.1	3.8	3.5	0.0	98.0	98.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-161	11330478	Kuskokwim Post Season Surveys	25.3	0.0	0.0	48.9	0.0	0.0	74.2	74.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (11 projects)			664.6	0.0	22.8	153.7	66.1	0.0	907.2	907.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	5175	Treaty Implementation																	
SP-1001	11330475	TI Border Sonar	74.6	0.0	1.5	12.0	6.0	0.0	94.1	94.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-1003	11330474	TI Lower Yukon Monitoring	79.3	0.0	6.5	13.5	23.0	0.0	122.3	122.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-1005	11330476	TI Yukon River Stock Identification	97.6	0.0	4.0	6.8	5.7	0.0	114.1	114.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (3 projects)			251.5	0.0	12.0	32.3	34.7	0.0	330.5	330.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	5300	Shellfish/Groundfish Projects																	
SP-2202	11330434	Norton Sound Trawl Survey	40.0	0.0	2.0	3.0	5.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (1 projects)			40.0	0.0	2.0	3.0	5.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	5305	Fish/Wildlife Careers For Alaskans																	
SP-3121	11330441	FWCA Nome Apprentice	3.3	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-3122	11330442	FWCA Bethel Apprentice	3.4	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (2 projects)			6.7	0.0	0.0	0.0	0.0	0.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Fishery Unit:	5600	CIP Positions																	
CP-613	11339049	AYK BBSSID Catch Sampling	47.5	0.0	0.0	0.0	0.0	0.0	47.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.5	0.0	0.0
CP-721	11339048	Assess of Pacific Salmon Resource in AYK	60.7	0.0	0.0	0.0	0.0	0.0	60.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.7	0.0	0.0
CP-727	11145125	Kusko Coho Genetics	6.8	0.0	0.0	0.0	0.0	0.0	6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	0.0	0.0
CP-732	11145716	Kuskokwim River Coho, Ph 3 of 3	103.0	0.0	0.0	0.0	0.0	0.0	103.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	103.0	0.0	0.0
CP-738	11145671	Norton Sound Chinook Growth	4.3	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0
CP-739	11145672	Productivity of Kuskokwim Juvenile Coho	6.8	0.0	0.0	0.0	0.0	0.0	6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	0.0	0.0
CP-744	11339043	Yukon River Pilot Station Sonar Est.	34.1	0.0	0.0	0.0	0.0	0.0	34.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.1	0.0	0.0
CP-807		Kuskokwim River Sockeye Salmon	18.2	0.0	0.0	0.0	0.0	0.0	18.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.2	0.0	0.0
Total (8 projects)			281.4	0.0	0.0	0.0	0.0	0.0	281.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	281.4	0.0	0.0
Totals for Region: 3		(93 projects)	6,266.1	0.0	351.2	1,021.7	558.7	7.0	8,204.7	1,276.5	0.0	5,747.3	0.0	76.3	0.0	0.0	281.4	259.7	72.2
Report Totals			6,266.1	0.0	351.2	1,021.7	558.7	7.0	8,204.7	1,276.5	0.0	5,747.3	0.0	76.3	0.0	0.0	281.4	259.7	72.2

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Region: 3		A-Y-K																	
Fishery Unit:	2000	A-Y-K Regional Administration																	
FM-30908	11130908	Anchorage Admin Unit	357.6	0.0	6.0	6.2	12.0	0.0	381.8	0.0	0.0	381.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-500	11130500	Program Management, AYK Region	469.8	0.0	31.0	79.3	32.8	7.0	619.9	0.0	0.0	493.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-501	11130501	Biometric Support, AYK	302.8	0.0	0.0	3.1	3.9	0.0	309.8	0.0	0.0	301.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-502	11130502	AYK Sonar Program Management	216.9	0.0	0.0	18.2	0.0	0.0	235.1	0.0	0.0	219.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-506	11130506	AYK Regional Resource Development	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-507	11130507	Miscellaneous RSAs to Dept. of Admin.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-508		AYK Region Stock Assessment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TF-503	11137503	Unallocated TF Authorization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (8 projects)			1,338.1	0.0	37.0	106.8	48.7	7.0	1,537.6	0.0	0.0	1,396.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	2100	Kuskokwim Bay Salmon																	
FM-520	11130520	Program Management, KB Salmon	127.7	0.0	3.0	3.5	1.3	0.0	135.5	0.0	0.0	115.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-521	11130521	Fishery Monitoring, Kuskokwim Bay	15.2	0.0	0.7	2.0	2.0	0.0	19.9	0.0	0.0	19.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-522	11130522	Escapement Surveys, KBS	0.0	0.0	0.0	5.0	0.4	0.0	5.4	0.0	0.0	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-523	11130523	Goodnews River Weir	35.7	0.0	0.4	3.8	3.9	0.0	43.8	0.0	0.0	43.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (4 projects)			178.6	0.0	4.1	14.3	7.6	0.0	204.6	0.0	0.0	184.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Fishery Unit:	2200	Kuskokwim River Salmon																	
FM-540	11130540	Program Management, Kusko Area	224.3	0.0	11.0	49.0	17.8	0.0	302.1	0.0	0.0	286.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-541	11130541	Fishery Monitoring Kuskokwim Area	76.7	0.0	0.0	1.5	1.0	0.0	79.2	0.0	0.0	79.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-542	11130542	Kuskokwim River Run Assessment	140.0	0.0	6.4	5.5	11.0	0.0	162.9	0.0	0.0	162.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-543	11130543	Escapement Surveys, KRS	0.0	0.0	2.0	8.2	2.0	0.0	12.2	0.0	0.0	12.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-544	11130544	Kogrukluk River Weir	51.1	0.0	2.2	19.7	5.0	0.0	78.0	0.0	0.0	78.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-545	11130545	Aniak River Sonar	38.9	0.0	1.5	12.4	9.9	0.0	62.7	0.0	0.0	62.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-546	11130546	Kuskokwim Tagging	80.4	0.0	4.0	24.7	36.3	0.0	145.4	0.0	0.0	145.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-547	11130547	Kuskokwim R Subsist Monitoring	37.1	0.0	0.0	0.0	0.8	0.0	37.9	0.0	0.0	37.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-548	11130548	Kuskokwim Area Stock Biology	33.3	0.0	4.6	0.0	2.1	0.0	40.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-549	11130549	Kuskokwim Test Fish (GF)	42.9	0.0	0.0	5.0	2.3	0.0	50.2	0.0	0.0	50.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TF-549	11137549	Kuskokwim Test Fish	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
Total (11 projects)			724.7	0.0	31.7	126.0	90.2	0.0	972.6	0.0	0.0	954.8	0.0	0.0	0.0	0.0	0.0	0.0	2.0
Fishery Unit:	2300	Yukon River Salmon																	
FM-560	11130560	Summer Season Program Mgmt	336.1	0.0	25.8	25.0	3.1	0.0	390.0	0.0	0.0	352.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-561		Summer Season Fishery Monitoring	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-562	11130562	Fall Season Program Management	376.9	0.0	26.0	96.5	10.9	0.0	510.3	0.0	0.0	449.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-563	11130563	Fall Season Fishery Monitoring	89.3	0.0	2.5	10.0	10.5	0.0	112.3	0.0	0.0	112.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-564	11130564	Pilot Station Sonar	298.9	0.0	3.9	28.6	37.9	0.0	369.3	0.0	0.0	369.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-565	11130565	Sheenjek Sonar	82.9	0.0	1.6	10.0	8.1	0.0	102.6	0.0	0.0	102.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-568	11130568	Lower YR TF / Stock Assessment	65.6	0.0	0.0	7.1	16.0	0.0	88.7	0.0	0.0	88.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-569	11130569	Upper Yukon River Salmon	0.0	0.0	0.0	14.5	0.5	0.0	15.0	0.0	0.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-571	11130571	Yukon River Escapement Surveys	18.9	0.0	1.9	25.6	0.8	0.0	47.2	0.0	0.0	47.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-572	11130572	Yukon River Subsistence Estimation	120.2	0.0	19.5	16.0	4.5	0.0	160.2	0.0	0.0	160.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-573	11130573	Yukon River JTC Support	44.7	0.0	46.0	15.0	0.0	0.0	105.7	0.0	0.0	105.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TF-568	11137568	Yukon River Test Fish Summer Season	10.5	0.0	0.0	9.5	50.0	0.0	70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	70.0
TF-570		Yukon River Test Fish Fall Season	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (13 projects)			1,444.0	0.0	127.2	257.8	142.3	0.0	1,971.3	0.0	0.0	1,793.9	0.0	0.0	0.0	0.0	0.0	0.0	70.0

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Fishery Unit:	2400	Norton Sound Salmon																	
FM-580	11130580	Program Management, NS Salmon	404.3	0.0	15.9	36.5	8.5	0.0	465.2	0.0	0.0	465.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-581	11130581	Norton Sound Fishery Monitoring	21.8	0.0	1.2	0.3	0.2	0.0	23.5	0.0	0.0	23.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-582	11130582	Unalakleet Fishery Monitoring	63.5	0.0	4.0	6.6	6.1	0.0	80.2	0.0	0.0	80.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-583	11130583	N.S. Salmon Escapement Surveys	0.0	0.0	0.6	15.0	0.0	0.0	15.6	0.0	0.0	15.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-585	11130585	Kwiniuk River Tower	43.8	0.0	0.8	4.1	6.0	0.0	54.7	0.0	0.0	54.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-586	11130586	Norton Sound Stock Biology	74.1	0.0	1.0	2.7	2.8	0.0	80.6	0.0	0.0	80.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-587	11130587	NW Bio/Rehabilitation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-589	11130589	Nome River Weir	27.4	0.0	0.0	1.0	6.3	0.0	34.7	0.0	0.0	34.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-590	11130590	N.S./Kotz Subsistence Surveys	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-591	11130591	Niukluk River Tower	35.6	0.0	0.8	1.0	10.2	0.0	47.6	0.0	0.0	47.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (10 projects)			670.5	0.0	24.3	67.2	40.1	0.0	802.1	0.0	0.0	802.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	2500	Kotzebue Salmon																	
FM-600	11130600	Program Mgmt - Kotzebue Salmon	0.0	0.0	3.7	17.9	2.2	0.0	23.8	0.0	0.0	23.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-601	11130601	Kotzebue Fishery Monitoring	11.2	0.0	0.4	0.7	0.5	0.0	12.8	0.0	0.0	12.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-602	11130602	Kotz Sound Escapement Surveys	0.0	0.0	0.0	6.2	0.0	0.0	6.2	0.0	0.0	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-606	11130606	Kobuk River Test Fish (GF)	20.9	0.0	3.0	3.5	3.3	0.0	30.7	0.0	0.0	30.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (4 projects)			32.1	0.0	7.1	28.3	6.0	0.0	73.5	0.0	0.0	73.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	2600	A-Y-K Herring																	
FM-620	11130620	Kuskokwim Monitoring	31.0	0.0	6.3	0.7	4.8	0.0	42.8	0.0	0.0	42.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-621	11130621	Cape Romanzof Monitoring	17.8	0.0	0.0	4.8	5.0	0.0	27.6	0.0	0.0	27.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-622	11130622	Norton Sound Monitoring	8.2	0.0	1.2	5.5	4.6	0.0	19.5	0.0	0.0	19.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-623	11130623	Kuskokwim Aerial Surveys	0.0	0.0	0.0	22.0	0.7	0.0	22.7	0.0	0.0	22.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-624	11130624	Norton Sound Aerial Surveys	0.0	0.0	0.0	13.5	0.0	0.0	13.5	0.0	0.0	13.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (5 projects)			57.0	0.0	7.5	46.5	15.1	0.0	126.1	0.0	0.0	126.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	2700	Norton Sound Crab																	
FM-640	11130640	N.S. Crab Fishery Monitoring	41.0	0.0	1.6	0.5	4.7	0.0	47.8	0.0	0.0	47.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (1 projects)			41.0	0.0	1.6	0.5	4.7	0.0	47.8	0.0	0.0	47.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Proj#	LC		71000	71000 Other	72000	73000	74000	75000	Total	1002 FED	1003 GFM	1004 GF	1005 GFPR	1007 IA	1018 EVOS	1024 F&G	1061 CIP	1108 SPR	1109 TF
Fishery Unit:	4400	Interagency Receipts																	
SP-450	11330445	Yukon River Panel & JTC Support	16.4	0.0	32.0	20.0	1.8	0.0	70.2	0.0	0.0	0.0	0.0	70.2	0.0	0.0	0.0	0.0	0.0
Total (1 projects)			16.4	0.0	32.0	20.0	1.8	0.0	70.2	0.0	0.0	0.0	0.0	70.2	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	4450	Fish & Game Fund																	
SP-454	11330454	Kusko Subsistence Survey's F&G Fund	39.9	0.0	0.0	0.0	10.1	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (1 projects)			39.9	0.0	0.0	0.0	10.1	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	4476	Commercial Crew License Fees																	
SP-471	11330335	Norton Sound King Crab - F&G Fund	5.3	0.0	0.0	0.6	2.0	0.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-472	11330336	NS Salmon and Herring - F&G Fund	18.0	0.0	2.0	4.0	5.9	0.0	29.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-480	11330378	AYK Kusko Mark Recapture F&G Fund	45.0	0.0	0.0	0.0	0.0	0.0	45.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (3 projects)			68.3	0.0	2.0	4.6	7.9	0.0	82.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	4500	Statutory Program Receipts																	
SP-505		YRP R&E Eagle Sonar Joint Operation	71.3	0.0	1.5	8.0	10.8	0.0	91.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	91.6	0.0
SP-511		YRP R&E Pilot Station Echosound Upgrad	0.0	0.0	0.0	0.0	8.0	30.0	38.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.0	0.0
SP-517	11330452	YDFDA Yukon River Mesh Size Study	13.3	0.0	0.0	0.0	0.3	0.0	13.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.6	0.0
SP-538	11330471	YRP R&M Pilot Station Extended Field Op	15.5	0.0	0.0	0.0	2.1	0.0	17.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.6	0.0
SP-565	11330470	YRP R&M Tanana River Fish Wheel Index	0.0	0.0	0.0	17.0	0.0	0.0	17.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.0	0.0
Total (5 projects)			100.1	0.0	1.5	25.0	21.2	30.0	177.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	177.8	0.0

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Proj#	LC		71000	71009 Other	72000	73000	74000	75000	Total	1002 FED	1003 GFM	1004 GF	1005 GFPR	1007 IA	1018 EVOS	1024 F&G	1061 CIP	1108 SPR	1109 TF
Fishery Unit:	5100	Federal Subsistence Projects																	
SP-109	11330449	OSM Kanektok & Goodnews River Salmon	53.4	0.0	0.7	1.1	7.3	0.0	62.5	62.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-111	11330431	OSM Inseason Monitoring	10.9	0.0	0.0	23.9	9.1	0.0	43.9	43.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-112	11330432	OSM Inseason Support	13.8	0.0	17.0	5.6	1.0	0.0	37.4	37.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-116	11330450	OSM Kusko Chum Reconstruction	2.6	0.0	0.0	0.0	0.0	0.0	2.6	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-118	11330448	OSM Lower Yukon Drift Test Fish	31.5	0.0	0.7	0.0	12.6	0.0	44.8	44.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-129	11330444	OSM Kusko Salmon ASL Assessment	83.6	0.0	0.5	0.5	0.0	0.0	84.6	84.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-137	11330451	OSM Tatlawiksuk River Weir Continuation	57.5	0.0	2.5	2.0	9.0	0.0	71.0	71.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-138	11330459	OSM ASL Subsistence Chinook Harvest	54.5	0.0	0.2	1.2	4.9	0.0	60.8	60.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-152	11330464	OSM Anvik River Sonar	44.1	0.0	1.5	8.6	8.4	0.0	62.6	62.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-157	11330460	OSM George River Salmon Weir	79.4	0.0	0.9	4.3	17.0	0.0	101.6	101.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-158	11330641	OSM Takotna River Weir	22.0	0.0	1.0	1.7	6.3	0.0	31.0	31.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (11 projects)			453.3	0.0	25.0	48.9	75.6	0.0	602.8	602.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	5175	Treaty Implementation																	
SP-1001	11330475	TI Border Sonar	71.3	0.0	1.5	8.0	10.8	0.0	91.6	91.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-1003	11330474	TI Lower Yukon Monitoring	81.7	0.0	7.0	14.0	23.5	0.0	126.2	126.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-1005	11330476	TI Yukon River Stock Identification	96.3	0.0	4.0	6.8	5.7	0.0	112.8	112.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-1008	11330477	TI Ichthyophonus	0.0	0.0	0.0	7.5	1.5	0.0	9.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (4 projects)			249.3	0.0	12.5	36.3	41.5	0.0	339.6	339.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	5280	Bering Sea Crab Research VII																	
SP-2137	11330467	NS Red King Crab Trawl Survey NOAA	0.0	0.0	0.0	90.0	0.0	0.0	90.0	90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (1 projects)			0.0	0.0	0.0	90.0	0.0	0.0	90.0	90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	5300	Shellfish/Groundfish Projects																	
SP-2202	11330434	Norton Sound Trawl Survey	0.0	0.0	5.0	40.0	5.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (1 projects)			0.0	0.0	5.0	40.0	5.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Proj#	LC		71000	71000 Other	72000	73000	74000	75000	Total	1002 FED	1003 GFM	1004 GF	1005 GFPR	1007 IA	1018 EVOS	1024 F&G	1061 CIP	1108 SPR	1109 TF
Fishery Unit:	5305	Fish/Wildlife Careers For Alaskans																	
SP-3121	11330441	FWCA Nome Apprentice	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-3122	11330442	FWCA Bethel Apprentice	9.0	0.0	0.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (2 projects)			9.0	0.0	0.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit:	5600	CIP Positions																	
CP-613	11339047	AYK Wassip CIP Sampling	37.3	0.0	0.0	0.0	0.0	0.0	37.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	37.3	0.0	0.0
CP-721	11339048	Assess of Pacific Salmon Resource in AYK	43.4	0.0	0.0	0.0	0.0	0.0	43.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	43.4	0.0	0.0
CP-727	11145125	Kusko Coho Genetics	6.7	0.0	0.0	0.0	0.0	0.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	0.0	0.0
CP-732	11145565	PCSRF-Kusko River Coho, Ph 2 of 3	115.7	0.0	0.0	0.0	0.0	0.0	115.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	115.7	0.0	0.0
CP-737	11145558	SSSF AYK Fall Chum Dist Upper Tanana	106.7	0.0	0.0	0.0	0.0	0.0	106.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	106.7	0.0	0.0
CP-738	11145671	AYK - Norton Sound Chinook Growth	30.5	0.0	0.0	0.0	0.0	0.0	30.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.5	0.0	0.0
CP-739	11145672	AYK Productivity of Kusko Juvenile Coho	32.2	0.0	0.0	0.0	0.0	0.0	32.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.2	0.0	0.0
CP-740	11145673	AYK-Fish River Models, Ph 1 of 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CP-744	11339043	Yukon River Pilot Station Sonar Est.	34.2	0.0	0.0	0.0	0.0	0.0	34.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.2	0.0	0.0
CP-765	11145554	PCSRI SSI - Kusko Chinook Reconstructio	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (10 projects)			406.7	0.0	0.0	0.0	0.0	0.0	406.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	406.6	0.0	0.0
Totals for Region: 3		(95 projects)	5,829.0	0.0	318.5	912.2	517.8	37.0	7,614.5	1,032.3	0.0	5,378.9	0.0	70.2	0.0	0.0	406.6	177.8	72.0
Report Totals			5,829.0	0.0	318.5	912.2	517.8	37.0	7,614.5	1,032.3	0.0	5,378.9	0.0	70.2	0.0	0.0	406.6	177.8	72.0

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Region 3
Component 2169

Project Number		71000	72000	73000	74000	75000	Total	1002 FED	1003 GFM	1004 GF	1007 IA	1018 EVOS	1036 CFLN	1061 CIP	1108 SPR	1109 TF	1156 RS	1194 FGND	1201 CFEC
Fishery Unit 2000 A-Y-K Regional Administration																			
FM-30908	Anchorage Admin Unit	270.1	4.9	5.3	11.5	0.0	291.8	0.0	0.0	291.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-500	Program Management, AYK Region	345.1	25.0	66.3	34.5	0.0	470.9	0.0	0.0	342.7	0.0	0.0	128.2	0.0	0.0	0.0	0.0	0.0	0.0
FM-501	Biometric Support, AYK	291.5	0.0	3.1	3.9	0.0	298.5	0.0	0.0	290.3	0.0	0.0	8.1	0.0	0.0	0.0	0.0	0.0	0.0
FM-502	AYK Sonar Program Management	196.6	0.0	18.2	0.0	0.0	214.8	0.0	0.0	200.5	0.0	0.0	14.3	0.0	0.0	0.0	0.0	0.0	0.0
FM-506	AYK Regional Resource Development	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-507	Miscellaneous RSAs to Dept. of Admin.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-508	AYK Region Stock Assessment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TF-503	Unallocated TF Authorization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 2000 (8 projects)		1,103.3	29.9	92.9	49.9	0.0	1,276.0	0.0	0.0	1,125.4	0.0	0.0	150.6	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit 2100 Kuskokwim Bay Salmon																			
FM-520	Program Management, KB Salmon	123.7	3.0	3.5	1.3	0.0	131.5	0.0	0.0	112.0	0.0	0.0	19.5	0.0	0.0	0.0	0.0	0.0	0.0
FM-521	Fishery Monitoring, Kuskokwim Bay	14.3	0.7	2.0	2.0	0.0	19.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-522	Escapement Surveys, KBS	0.0	0.0	5.0	0.4	0.0	5.4	0.0	0.0	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-523	Goodnews River Weir	35.2	0.4	3.8	3.9	0.0	43.3	0.0	0.0	43.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 2100 (4 projects)		173.2	4.1	14.3	7.6	0.0	199.2	0.0	0.0	179.7	0.0	0.0	19.5	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit 2200 Kuskokwim River Salmon																			
FM-540	Program Management, Kusko Area	267.3	11.5	49.1	18.1	0.0	346.0	0.0	0.0	327.9	0.0	0.0	18.1	0.0	0.0	0.0	0.0	0.0	0.0
FM-541	Fishery Monitoring Kuskokwim Area	71.8	0.0	1.6	1.0	0.0	74.3	0.0	0.0	74.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-542	Kuskokwim River Run Assessment	134.4	6.4	5.5	11.0	0.0	157.3	0.0	0.0	157.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-543	Escapement Surveys, KRS	0.0	2.0	8.2	2.0	0.0	12.2	0.0	0.0	12.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-544	Kogrukluk River Weir	38.3	2.2	19.7	5.0	0.0	65.2	0.0	0.0	65.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-545	Aniak River Sonar	36.8	1.5	12.4	9.9	0.0	60.4	0.0	0.0	60.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-546	Kuskokwim Tagging	86.5	4.0	24.7	36.3	0.0	151.5	0.0	0.0	151.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-547	Kuskokwim R Subsist Monitoring	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-548	Kuskokwim Area Stock Biology	33.1	4.6	0.0	2.1	0.0	39.8	0.0	0.0	39.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-549	Kuskokwim Test Fish (GF)	40.4	0.0	5.0	2.3	0.0	47.7	0.0	0.0	47.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TF-549	Kuskokwim Test Fish	0.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0
Totals for 2200 (11 projects)		708.4	32.2	126.1	89.7	0.0	956.4	0.0	0.0	936.2	0.0	0.0	18.1	0.0	0.0	2.0	0.0	0.0	0.0

River Salmon Bay Salmon

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Region 3 Component 2169 Project Number	71000	72000	73000	74000	75000	Total	1002 FED	1003 GFM	1004 GF	1007 IA	1018 EVOS	1036 CFLN	1061 CIP	1108 SPR	1109 TF	1156 RS	1194 FGND	1201 CFEC
Fishery Unit 2300 Yukon River Salmon																		
FM-560 Summer Season Program Mgmt	290.1	19.1	25.0	3.1	0.0	337.3	0.0	0.0	304.9	0.0	0.0	32.4	0.0	0.0	0.0	0.0	0.0	0.0
FM-561 Summer Season Fishery Monitoring	119.1	5.0	21.1	9.0	0.0	154.2	0.0	0.0	154.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-562 Fall Season Program Management	333.0	26.0	96.5	10.9	0.0	466.4	0.0	0.0	402.4	0.0	0.0	64.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-563 Fall Season Fishery Monitoring	81.6	2.5	10.0	10.5	0.0	104.6	0.0	0.0	104.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-564 Anvik Sonar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-565 Sheenjek Sonar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-568 Tanana River Fall Chum Tagging	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-569 Upper Yukon River Salmon	0.0	0.0	14.5	0.5	0.0	15.0	0.0	0.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-571 Yukon River Run Assessment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TF-568 Yukon River Test Fish Summer Season	10.2	0.0	9.8	50.0	0.0	70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	70.0	0.0	0.0	0.0
TF-570 Yukon River Test Fish Fall Season	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 2300 (11 projects)	834.0	52.6	176.9	84.0	0.0	1,147.5	0.0	0.0	981.0	0.0	0.0	96.4	0.0	0.0	70.0	0.0	0.0	0.0
Fishery Unit 2400 Norton Sound Salmon																		
FM-580 Program Management, NS Salmon	369.5	15.9	36.5	8.5	0.0	430.4	0.0	0.0	430.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-581 Norton Sound Fishery Monitoring	20.4	1.2	0.3	0.2	0.0	22.1	0.0	0.0	22.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-582 Unalakleet Fishery Monitoring	42.7	1.3	6.5	3.1	0.0	53.7	0.0	0.0	53.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-583 N.S. Salmon Escapement Surveys	0.0	0.6	15.0	0.0	0.0	15.6	0.0	0.0	15.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-585 Kwiniuk River Tower	40.7	0.8	4.1	6.0	0.0	51.6	0.0	0.0	51.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-586 Norton Sound Stock Biology	69.4	1.0	2.7	2.8	0.0	75.9	0.0	0.0	75.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-587 NW Bio/Rehabilitation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-589 Nome River Weir	24.9	0.0	1.0	6.3	0.0	32.2	0.0	0.0	32.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-590 N.S./Kotz Subsistence Surveys	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-591 Niukluk River Tower	33.5	0.8	1.0	10.2	0.0	45.5	0.0	0.0	45.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 2400 (10 projects)	601.1	21.6	67.2	37.1	0.0	727.0	0.0	0.0	726.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit 2500 Kotzebue Salmon																		
FM-600 Program Mgmt - Kotzebue Salmon	0.0	3.7	17.9	2.2	0.0	23.8	0.0	0.0	23.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-601 Kotzebue Fishery Monitoring	10.4	0.4	0.7	0.5	0.0	12.0	0.0	0.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-602 Kotz Sound Escapement Surveys	0.0	0.0	6.2	0.0	0.0	6.2	0.0	0.0	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-606 Kobuk River Test Fish (GF)	24.5	3.0	3.5	3.3	0.0	34.3	0.0	0.0	34.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 2500 (4 projects)	34.9	7.1	28.3	6.0	0.0	76.3	0.0	0.0	76.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Region 3
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Project Number		71000	72000	73000	74000	75000	Total	1002 FED	1003 GFM	1004 GF	1007 IA	1018 EVOS	1036 CFLN	1061 CIP	1108 SPR	1109 TF	1156 RS	1194 FGND	1201 CFEC
Fishery Unit 2600 A-Y-K Herring																			
FM-620	Kuskokwim Monitoring	30.5	6.3	0.7	4.8	0.0	42.3	0.0	0.0	42.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-621	Cape Romanzof Monitoring	16.5	0.0	4.8	5.0	0.0	26.3	0.0	0.0	26.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-622	Norton Sound Monitoring	7.4	1.2	5.5	4.6	0.0	18.7	0.0	0.0	18.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-623	Kuskokwim Aerial Surveys	0.0	0.0	22.0	0.7	0.0	22.7	0.0	0.0	22.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-624	Norton Sound Aerial Surveys	0.0	0.0	13.5	0.0	0.0	13.5	0.0	0.0	13.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 2600 (5 projects)		54.4	7.5	46.5	15.1	0.0	123.5	0.0	0.0	123.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit 2700 Norton Sound Crab																			
FM-640	N.S. Crab Fishery Monitoring	37.5	1.6	0.5	4.7	0.0	44.3	0.0	0.0	44.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 2700 (1 projects)		37.5	1.6	0.5	4.7	0.0	44.3	0.0	0.0	44.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for Region 3 (54 projects)		3,546.8	156.6	552.7	294.1	0.0	4,550.2	0.0	0.0	4,193.4	0.0	0.0	284.5	0.0	0.0	72.0	0.0	0.0	0.0
Report Totals		3,546.8	156.6	552.7	294.1	0.0	4,550.2	0.0	0.0	4,193.4	0.0	0.0	284.5	0.0	0.0	72.0	0.0	0.0	0.0

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Fishery Unit 4325 CF Indirect Projects																		
SP-190 Yukon River Salmon Acreement Indirect	43.5	2.7	1.5	8.5	0.0	56.2	56.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 4325 (1 projects)	43.5	2.7	1.5	8.5	0.0	56.2	56.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit 4400 Interagency Receipts																		
SP-450 Yukon River Panel & JTC Support	15.0	32.0	20.0	1.8	0.0	68.8	0.0	0.0	0.0	68.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 4400 (1 projects)	15.0	32.0	20.0	1.8	0.0	68.8	0.0	0.0	0.0	68.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit 4450 Fines and Forfeitures																		
SP-454 Kusko Subsistence Survey's F&G Fund	0.0	0.0	42.4	0.0	0.0	42.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.4	0.0
Totals for 4450 (1 projects)	0.0	0.0	42.4	0.0	0.0	42.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.4	0.0
Fishery Unit 4470 Commercial License Fees																		
SP-471 Norton Sound King Crab - F&G Fund	5.3	0.0	0.6	2.0	0.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	0.0
SP-472 NS Salmon and Herring - F&G Fund	19.2	2.0	2.8	5.9	0.0	29.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.9	0.0
SP-480 AYK Kusko Mark Recapture F&G Fund	45.0	0.0	0.0	0.0	0.0	45.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.0	0.0
Totals for 4470 (3 projects)	69.5	2.0	3.4	7.9	0.0	82.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82.8	0.0
Fishery Unit 4500 Statutory Program Receipts																		
SP-517 YDFDA Yukon River Mesh Size Study	0.0	0.0	0.0	26.7	0.0	26.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.7	0.0	0.0	0.0	0.0
SP-542 R&E Chinook Salmon Aging Consistency	13.0	2.2	9.7	0.2	0.0	25.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.1	0.0	0.0	0.0	0.0
SP-543 R&E Yukon River Chinook Ichthyophonus	0.0	0.9	7.3	2.4	0.0	10.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.6	0.0	0.0	0.0	0.0
Totals for 4500 (3 projects)	13.0	3.1	17.0	29.3	0.0	62.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.4	0.0	0.0	0.0	0.0
Fishery Unit 4800 US/Canada - Region 3																		
SP-810 JTC Support	122.6	15.5	7.0	6.3	0.0	151.4	151.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-814 Subsistence Harvest Monitoring	82.4	17.4	7.5	3.8	0.0	111.1	111.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-815 Spawning Escape Survey	15.6	1.8	25.6	0.8	0.0	43.8	43.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-817 Yukon River Sonar	285.8	3.2	34.9	35.8	0.0	359.7	359.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-818 Yukon River Salmon Program Support	64.4	0.0	6.2	16.8	0.0	87.4	87.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-819 Sheenjek River Sonar	67.1	0.9	9.2	4.8	0.0	82.0	82.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-821 Administrative Support	41.8	1.6	0.0	0.0	0.0	43.4	43.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 4800 (7 projects)	679.7	40.4	90.4	68.3	0.0	878.8	878.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Fishery Unit 4900 FMP - EJ Grant																		
SP-919 EJ - Management of Nome Crab Community	14.1	0.0	0.0	0.9	0.0	15.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 4900 (1 projects)	14.1	0.0	0.0	0.9	0.0	15.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit 4930 WASSIP																		
SP-956 AYK WASSIP Catch Samplin	14.9	2.2	11.4	1.0	0.0	29.5	29.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 4930 (1 projects)	14.9	2.2	11.4	1.0	0.0	29.5	29.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit 5100 Federal Subsistence Projects																		
SP-109 OSM Kanektok & Goodnews River Salmon	52.4	1.3	10.3	8.2	10.0	82.2	82.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-111 OSM Inseason Monitoring	18.8	0.0	34.9	0.0	0.0	53.7	53.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-112 OSM Inseason Support	13.6	9.9	5.0	1.1	0.0	29.6	29.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-116 OSM Kusko Chum Reconstruction	23.3	0.0	0.0	0.0	0.0	23.3	23.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-118 OSM Lower Yukon Drift Test Fish	32.4	0.6	0.0	11.6	7.0	51.6	51.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-122 OSM George and Takotna River Weirs	34.1	4.1	6.7	6.2	0.0	51.1	51.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-129 OSM Kusko Salmon ASL Assessment	60.9	0.4	0.5	0.0	0.0	61.8	61.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-130 OSM Develop Shared Fishery Database	17.0	0.7	4.1	6.1	0.0	27.9	27.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-133 OSM Kusko Salmon Stock Assessment	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-134 OSM Tanana Fall Chum Mark Recapture	128.6	1.7	39.2	20.6	0.0	190.1	190.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-137 OSM Tatlawiksuk River Weir Continuation	53.5	2.5	4.0	10.0	0.0	70.0	70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-138 OSM ASL Subsistence Chinook Harvest	16.5	0.0	3.7	0.0	0.0	20.2	20.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-152 OSM Anvik River Sonar	19.1	1.5	7.1	4.8	0.0	32.5	32.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 5100 (13 projects)	471.2	22.7	115.5	68.6	17.0	695.0	695.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit 5175 Treaty Implementation																		
SP-1001 TI Border Sonar	156.3	3.0	16.1	22.0	0.0	197.4	197.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-1002 TI Yukon Subsistence Survey	52.2	2.0	10.2	0.2	0.0	64.6	64.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-1005 TI Yukon River Stock Identification	83.4	3.6	7.2	7.0	0.0	101.2	101.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 5175 (3 projects)	291.9	8.6	33.5	29.2	0.0	363.2	363.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit 5300 Shellfish/Groundfish Projects																		
SP-2202 Norton Sound Trawl Survey	0.0	5.0	40.0	5.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0
Totals for 5300 (1 projects)	0.0	5.0	40.0	5.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0

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Fishery Unit 5305 Fish/Wildlife Careers For Alaskans																		
SP-3121 FWCA Nome Apprentice	9.0	0.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0
SP-3122 FWCA Bethel Apprentice	4.7	1.2	1.4	3.1	0.0	10.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.4
Totals for 5305 (2 projects)	13.7	1.2	1.4	3.1	0.0	19.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.5
Fishery Unit 5600 CIP Positions																		
CP-613 AYK Wassip CIP Sampling	29.2	0.0	0.0	0.0	0.0	29.2	0.0	0.0	0.0	0.0	0.0	0.0	29.2	0.0	0.0	0.0	0.0	0.0
CP-726 AYK SSI - Fall Chum Tanana Radio	103.1	0.0	0.0	0.0	0.0	103.1	0.0	0.0	0.0	0.0	0.0	0.0	103.1	0.0	0.0	0.0	0.0	0.0
CP-744 Yukon River Pilot Station Sonar Est.	32.5	0.0	0.0	0.0	0.0	32.5	0.0	0.0	0.0	0.0	0.0	0.0	32.5	0.0	0.0	0.0	0.0	0.0
CP-764 AYK SSI - Kusko Sockeye Investigations	47.0	0.0	0.0	0.0	0.0	47.0	0.0	0.0	0.0	0.0	0.0	0.0	47.0	0.0	0.0	0.0	0.0	0.0
CP-765 AYK SSI - Kusko Chinook Reconstruction	38.0	0.0	0.0	0.0	0.0	38.0	0.0	0.0	0.0	0.0	0.0	0.0	38.0	0.0	0.0	0.0	0.0	0.0
Totals for 5600 (5 projects)	249.8	0.0	0.0	0.0	0.0	249.8	0.0	0.0	0.0	0.0	0.0	0.0	249.8	0.0	0.0	0.0	0.0	0.0
Totals for Region 3 (42 projects)	1,876.3	119.9	376.5	223.6	17.0	2,613.3	2,037.7	0.0	0.0	68.8	0.0	0.0	249.8	62.4	0.0	0.0	125.2	69.5
Report Totals	1,876.3	119.9	376.5	223.6	17.0	2,613.3	2,037.7	0.0	0.0	68.8	0.0	0.0	249.8	62.4	0.0	0.0	125.2	69.5

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Region 3 A-Y-K																		
Fishery Unit 2000 A-Y-K Regional Administration																		
FM-30908 Anchorage Admin Unit	283.3	3.5	5.0	11.5	0.0	283.3	0.0	0.0	283.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-500 Program Management, AYK Region	355.3	25.0	47.3	18.0	0.0	445.6	0.0	0.0	332.7	0.0	0.0	112.8	0.0	0.0	0.0	0.0	0.0	0.0
FM-501 Biometric Support, AYK	282.4	0.0	3.1	3.9	0.0	289.4	0.0	0.0	291.3	0.0	0.0	8.2	0.0	0.0	0.0	0.0	0.0	0.0
FM-502 AYK Sonar Program Management	193.6	0.0	18.2	0.0	0.0	211.8	0.0	0.0	197.7	0.0	0.0	14.1	0.0	0.0	0.0	0.0	0.0	0.0
FM-506 AYK Regional Resource Development	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-507 Miscellaneous RSAs to Dept. of Admin.	0.0	0.0	132.1	0.0	0.0	132.1	0.0	0.0	132.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-508 AYK Region Stock Assessment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TF-503 Unallocated TF Authorization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 2000 (8 projects)	1,104.6	28.5	205.7	33.4	0.0	1,372.2	0.0	0.0	1,237.0	0.0	0.0	135.2	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit 2100 Kuskokwim Bay Salmon																		
FM-520 Program Management, KB Salmon	105.6	3.0	3.5	1.3	0.0	113.4	0.0	0.0	96.6	0.0	0.0	16.8	0.0	0.0	0.0	0.0	0.0	0.0
FM-521 Fishery Monitoring, Kuskokwim Bay	14.1	0.7	2.0	2.0	0.0	18.8	0.0	0.0	18.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-522 Escapement Surveys, KBS	0.0	0.0	5.0	0.4	0.0	5.4	0.0	0.0	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-523 Goodnews River Weir	38.0	0.4	3.8	3.9	0.0	46.1	0.0	0.0	46.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 2100 (4 projects)	157.7	4.1	14.3	7.6	0.0	183.7	0.0	0.0	166.9	0.0	0.0	16.8	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit 2200 Kuskokwim River Salmon																		
FM-540 Program Management, Kusko Area	282.5	11.5	50.0	18.1	0.0	362.1	0.0	0.0	343.2	0.0	0.0	18.9	0.0	0.0	0.0	0.0	0.0	0.0
FM-541 Fishery Monitoring Kuskokwim Area	73.3	0.0	1.5	1.0	0.0	75.8	0.0	0.0	75.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-542 Kuskokwim River Run Assessment	132.0	8.4	5.5	11.1	0.0	155.0	0.0	0.0	155.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-543 Escapement Surveys, KRS	0.0	2.0	8.2	2.0	0.0	12.2	0.0	0.0	12.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-544 Kogrukluk River Weir	41.5	2.2	19.7	5.0	0.0	68.4	0.0	0.0	68.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-545 Aniak River Sonar	37.1	1.5	12.4	9.9	0.0	60.9	0.0	0.0	60.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-546 Kuskokwim Tagging	90.6	4.0	24.7	36.3	0.0	155.6	0.0	0.0	155.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-547 Kuskokwim R Subsist Monitoring	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-548 Kuskokwim Area Stock Biology	33.0	4.6	0.0	2.1	0.0	39.7	0.0	0.0	39.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-549 Kuskokwim Test Fish (GF)	41.0	0.0	5.0	2.3	0.0	48.3	0.0	0.0	48.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TF-549 Kuskokwim Test Fish	0.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0
Totals for 2200 (11 projects)	731.0	32.2	127.0	89.8	0.0	980.0	0.0	0.0	959.0	0.0	0.0	18.9	0.0	0.0	2.0	0.0	0.0	0.0

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Fishery Unit	2300 Yukon River Salmon																		
FM-560	Summer Season Program Mgmt	291.3	19.1	25.0	3.1	0.0	338.5	0.0	0.0	301.5	0.0	0.0	37.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-561	Summer Season Fishery Monitoring	127.4	5.0	21.1	9.0	0.0	162.5	0.0	0.0	162.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-562	Fall Season Program Management	335.3	25.3	95.8	9.6	0.0	466.0	0.0	0.0	389.4	0.0	0.0	76.7	0.0	0.0	0.0	0.0	0.0	0.0
FM-563	Fall Season Fishery Monitoring	83.1	2.5	10.0	10.5	0.0	106.1	0.0	0.0	106.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-564	Anvik Sonar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-565	Sheenjek Sonar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-568	Tanana River Fall Chum Tagging	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-569	Upper Yukon River Salmon	0.0	0.0	14.5	0.5	0.0	15.0	0.0	0.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-571	Yukon River Run Assessment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TF-568	Yukon River Test Fish Summer Season	10.0	0.0	8.9	50.2	0.0	69.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	69.1	0.0	0.0	0.0
TF-570	Yukon River Test Fish Fall Season	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 2300 (11 projects)		847.1	51.9	175.3	82.9	0.0	1,157.2	0.0	0.0	974.4	0.0	0.0	113.6	0.0	0.0	69.1	0.0	0.0	0.0
Fishery Unit	2400 Norton Sound Salmon																		
FM-580	Program Management, NS Salmon	402.5	15.9	36.5	8.7	0.0	463.6	0.0	0.0	463.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-581	Norton Sound Fishery Monitoring	21.1	1.2	0.3	0.2	0.0	22.8	0.0	0.0	22.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-582	Unalakleet Fishery Monitoring	43.3	1.3	6.6	3.1	0.0	54.3	0.0	0.0	54.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-583	N.S. Salmon Escapement Surveys	0.0	0.6	15.0	0.0	0.0	15.6	0.0	0.0	15.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-585	Kwiniuk River Tower	29.3	0.8	4.1	6.0	0.0	40.2	0.0	0.0	40.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-586	Norton Sound Stock Biology	70.6	1.0	2.7	2.8	0.0	77.1	0.0	0.0	77.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-587	NW Bio/Rehabilitation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-589	Nome River Weir	25.3	0.0	1.0	6.3	0.0	32.6	0.0	0.0	32.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-590	N.S./Kotz Subsistence Surveys	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-591	Niukluk River Tower	32.3	0.8	1.0	10.2	0.0	44.3	0.0	0.0	44.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 2400 (10 projects)		624.4	21.6	67.2	37.3	0.0	750.5	0.0	0.0	750.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit	2500 Kotzebue Salmon																		
FM-600	Program Mgmt - Kotzebue Salmon	0.0	3.7	17.9	2.2	0.0	23.8	0.0	0.0	23.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-601	Kotzebue Fishery Monitoring	10.4	0.4	0.7	0.5	0.0	12.0	0.0	0.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-602	Kotz Sound Escapement Surveys	0.0	0.0	6.2	0.0	0.0	6.2	0.0	0.0	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-606	Kobuk River Test Fish (GF)	25.2	3.0	3.5	3.3	0.0	35.0	0.0	0.0	35.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 2500 (4 projects)		35.6	7.1	28.3	6.0	0.0	77.0	0.0	0.0	76.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Fishery Unit 2600 A-Y-K Herring																		
FM-620 Kuskokwim Monitoring	28.9	6.3	0.7	4.8	0.0	40.7	0.0	0.0	40.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-621 Cape Romanzof Monitoring	15.1	0.0	4.8	5.0	0.0	24.9	0.0	0.0	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-622 Norton Sound Monitoring	7.3	1.0	4.4	4.3	0.0	17.0	0.0	0.0	17.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-623 Kuskokwim Aerial Surveys	0.0	0.0	17.8	0.7	0.0	18.5	0.0	0.0	18.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FM-624 Norton Sound Aerial Surveys	0.0	0.0	11.5	0.0	0.0	11.5	0.0	0.0	11.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 2600 (5 projects)	51.3	7.3	39.2	14.8	0.0	112.6	0.0	0.0	112.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit 2700 Norton Sound Crab																		
FM-640 N.S. Crab Fishery Monitoring	40.7	1.6	0.5	4.7	0.0	47.5	0.0	0.0	47.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 2700 (1 projects)	40.7	1.6	0.5	4.7	0.0	47.5	0.0	0.0	47.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for Region 3 (54 projects)	3,592.4	154.3	657.5	276.5	0.0	4,680.7	0.0	0.0	4,325.0	0.0	0.0	284.5	0.0	0.0	71.1	0.0	0.0	0.0
Report Totals	3,592.4	154.3	657.5	276.5	0.0	4,680.7	0.0	0.0	4,325.0	0.0	0.0	284.5	0.0	0.0	71.1	0.0	0.0	0.0

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Region 3 A-Y-K																		
Fishery Unit 4325 CF Indirect Projects																		
SP-189 AYK SSI Indirect Receipts	12.8	0.0	0.0	0.0	0.0	12.8	12.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-190 Yukon River Salmon Agreement Indirect	41.8	0.0	17.3	1.1	0.0	60.2	60.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 4325 (2 projects)	54.6	0.0	17.3	1.1	0.0	73.0	73.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit 4400 Interagency Receipts																		
SP-453 Yukon River Panel & JTC Support	25.8	33.8	5.0	1.9	0.0	66.5	0.0	0.0	0.0	66.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 4400 (1 projects)	25.8	33.8	5.0	1.9	0.0	66.5	0.0	0.0	0.0	66.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit 4470 Commercial License Fees																		
SP-471 Norton Sound King Crab - F&G Fund	5.3	0.0	0.6	2.0	0.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	0.0
SP-472 Norton Sound Herring - F&G Fund	19.2	2.0	2.8	5.9	0.0	29.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.9	0.0
SP-480 AYK Kusko Mark Recapture F&G Fund	45.0	0.0	0.0	0.0	0.0	45.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.0	0.0
Totals for 4470 (3 projects)	69.5	2.0	3.4	7.9	0.0	82.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82.8	0.0
Fishery Unit 4500 Statutory Program Receipts																		
SP-504 Pilot Station Sonar Project	16.1	0.0	0.0	1.8	0.0	17.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.9	0.0	0.0	0.0	0.0
SP-511 CDQ - Lower Yukon River Drift Test Fish	16.3	0.0	1.0	7.4	7.0	31.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31.7	0.0	0.0	0.0	0.0
SP-539 Kusko R Sockeye Salmon Radio Telemetry	0.0	0.0	0.0	7.6	0.0	7.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.6	0.0	0.0	0.0	0.0
Totals for 4500 (3 projects)	32.4	0.0	1.0	16.8	7.0	57.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.2	0.0	0.0	0.0	0.0
Fishery Unit 4800 US/Canada - Region 3																		
SP-810 JTC Support	120.1	9.9	3.5	2.7	0.0	136.2	136.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-814 Subsistence Harvest Monitoring	72.4	17.4	5.3	3.8	0.0	98.9	98.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-815 Spawning Escape Survey	12.8	1.8	20.6	0.4	0.0	35.6	35.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-817 Yukon River Sonar	285.9	3.0	34.9	27.5	0.0	351.3	351.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-818 Yukon River Salmon Program Support	66.0	0.0	6.3	16.3	0.0	88.6	88.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-819 Sheenjek River Sonar	67.7	0.8	9.2	4.8	0.0	82.5	82.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-821 Administrative Support	43.6	2.1	0.0	0.0	0.0	45.7	45.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-822 Yukon Radio Telemetry	20.5	0.9	0.0	0.0	0.0	21.4	21.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 4800 (8 projects)	689.0	35.9	79.8	55.5	0.0	860.2	860.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Fishery Unit 4900 FMP - EJ Grant																		
SP-919 EJ - Management of Nome Crab Community	12.1	2.5	0.0	0.8	12.0	27.4	27.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 4900 (1 projects)	12.1	2.5	0.0	0.8	12.0	27.4	27.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit 4930 WASSIP																		
SP-956 AYK WASSIP Catch Samplin	17.4	2.5	9.1	1.0	0.0	30.0	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 4930 (1 projects)	17.4	2.5	9.1	1.0	0.0	30.0	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit 5100 Federal Subsistence Projects																		
SP-109 OSM Goodnews River Coho Escapement	23.2	0.3	0.5	0.7	0.0	24.7	24.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-111 OSM Inseason Monitoring	7.4	0.0	0.0	0.0	0.0	7.4	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-112 OSM Inseason Support	20.1	9.0	4.5	0.6	0.0	34.2	34.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-117 OSM Kanektok River Weir	21.1	1.4	6.5	6.5	0.0	35.5	35.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-118 OSM Lower Yukon Drift Test Fish	30.1	0.0	2.2	8.9	0.0	41.2	41.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-122 OSM George and Takotna River Weirs	51.7	4.6	5.9	8.1	0.0	70.3	70.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-129 OSM Kusko Salmon ASL Assessment	39.9	1.8	1.5	1.5	0.0	44.7	44.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-130 OSM Develop Shared Fishery Database	42.6	1.0	4.2	6.1	0.0	53.9	53.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-133 OSM Kusko Salmon Stock Assessment	25.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-134 OSM Tanana Fall Chum Mark Recapture	136.3	2.0	41.7	18.3	0.0	198.3	198.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-137 OSM Tatlawiksuk River Weir Continuation	32.5	2.0	3.0	4.4	0.0	41.9	41.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-138 OSM ASL Subsistence Chinook Harvest	25.9	0.5	5.6	0.5	0.0	32.5	32.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-152 OSM Anvik River Sonar	29.3	3.0	11.0	8.3	0.0	51.6	51.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 5100 (13 projects)	485.1	25.6	86.6	63.9	0.0	661.2	661.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit 5175 Treaty Implementation																		
SP-1001 TI Eagle Border Sonar	146.0	4.0	20.5	18.9	0.0	189.4	189.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-1002 TI Yukon Subsistence Survey	41.7	1.2	0.7	0.8	0.0	44.4	44.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-1004 TI Emmonak Test Fish Support	0.0	0.0	0.0	0.0	10.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-1005 TI Yukon River Stock Identification	83.0	4.0	8.1	7.0	0.0	102.1	102.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SP-1008 TI Ichthyophonus	53.3	0.0	0.0	0.0	0.0	53.3	53.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 5175 (5 projects)	324.0	9.2	29.3	26.7	10.0	399.2	399.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishery Unit 5300 Receipt Services Shellfish Groundfi																		
SP-2202 Norton Sound Trawl Survey	0.0	5.0	40.0	5.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0
Totals for 5300 (1 projects)	0.0	5.0	40.0	5.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0

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Fishery Unit 5305 Receipt Services Bristol Bay Scienc																		
SP-3121 FWCA Nome Apprentice	18.2	0.0	0.0	0.0	0.0	18.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.2
SP-3122 FWCA Bethel Apprentice	18.8	0.0	0.0	0.0	0.0	18.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.8
Totals for 5305 (2 projects)	37.0	0.0	0.0	0.0	0.0	37.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	37.0
Fishery Unit 5600 CIP Positions																		
CP-626 NS Disaster - Program Administration	12.5	0.0	0.0	0.0	0.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	12.5	0.0	0.0	0.0	0.0	0.0
CP-628 NS Disaster - Escapement Monitoring	99.2	0.0	0.0	0.0	0.0	99.2	0.0	0.0	0.0	0.0	0.0	0.0	99.2	0.0	0.0	0.0	0.0	0.0
CP-629 NS Disaster - Unalakleet River Chum	34.7	0.0	0.0	0.0	0.0	34.7	0.0	0.0	0.0	0.0	0.0	0.0	34.7	0.0	0.0	0.0	0.0	0.0
CP-630 NS Disaster - Fish River Complex Salmon	56.3	0.0	0.0	0.0	0.0	56.3	0.0	0.0	0.0	0.0	0.0	0.0	56.3	0.0	0.0	0.0	0.0	0.0
CP-632 NS Disaster - Research Support	114.0	0.0	0.0	0.0	0.0	114.0	0.0	0.0	0.0	0.0	0.0	0.0	114.0	0.0	0.0	0.0	0.0	0.0
CP-735 NS Disaster - Information Database	38.0	0.0	0.0	0.0	0.0	38.0	0.0	0.0	0.0	0.0	0.0	0.0	38.0	0.0	0.0	0.0	0.0	0.0
CP-741 Effects of Ichthyophonus on Chinook	21.7	0.0	0.0	0.0	0.0	21.7	0.0	0.0	0.0	0.0	0.0	0.0	21.7	0.0	0.0	0.0	0.0	0.0
CP-764 AYK SSI - Kusko Sockeye Investigations	19.6	0.0	0.0	0.0	0.0	19.6	0.0	0.0	0.0	0.0	0.0	0.0	19.6	0.0	0.0	0.0	0.0	0.0
CP-765 AYK SSI - Kusko Chinook Reconstruction	57.8	0.0	0.0	0.0	0.0	57.8	0.0	0.0	0.0	0.0	0.0	0.0	57.8	0.0	0.0	0.0	0.0	0.0
Totals for 5600 (9 projects)	453.8	0.0	0.0	0.0	0.0	453.8	0.0	0.0	0.0	0.0	0.0	0.0	453.8	0.0	0.0	0.0	0.0	0.0
Totals for Region 3 (49 projects)	2,200.7	116.5	271.5	180.6	29.0	2,798.3	2,050.9	0.0	0.0	66.5	0.0	0.0	453.8	57.2	0.0	0.0	82.8	87.0
Report Totals	2,200.7	116.5	271.5	180.6	29.0	2,798.3	2,050.9	0.0	0.0	66.5	0.0	0.0	453.8	57.2	0.0	0.0	82.8	87.0

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Project #	Ledger Code	Fed Aid Job #	Project Title	71000	71000 Less 4%	71000 Other	72000	73000	74000	75000	Total	FED	GF	I/A	EVOS	F&G	HAZ	CIP	SPR	SFEA
[redacted]																				

Region 3 Interior

Component: 464 Sport Fisheries

1 - F10 Sport Fish Investigations

SF-3021	11233021	C-3-1	AYK Research Supervision	0.0	0.0	0.0	3.8	2.0	3.8	0.0	9.6	7.2	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0
~~SF-3031~~	~~11233031~~	~~R-3-6~~	~~Fairbanks Area Management (Fed)~~	~~65.8~~	~~62.4~~	~~0.0~~	~~0.0~~	~~0.0~~	~~3.4~~	~~0.0~~	~~65.8~~	~~64.8~~	~~0.0~~	~~0.0~~	~~0.0~~	~~21.1~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3041	11233041	R-3-6	Delta Area Management (Fed)	61.2	58.8	0.0	0.0	0.0	2.5	0.0	61.3	45.9	0.0	0.0	0.0	15.3	0.0	0.0	0.0	0.0
SF-3051	11233051	R-3-6	AYK Area Management (Fed)	105.3	101.1	0.0	0.0	0.0	4.2	0.0	105.3	79.0	0.0	0.0	0.0	26.3	0.0	0.0	0.0	0.0
SF-3061	11233061	R-3-6	Northwest Area Management (Fed)	83.1	79.8	0.0	0.0	0.0	3.3	0.0	83.1	62.3	0.0	0.0	0.0	20.8	0.0	0.0	0.0	0.0
SF-3071	11233071	R-3-7b	Kobuk River Sheefish	40.7	39.1	0.0	0.0	0.0	1.6	0.0	40.7	30.5	0.0	0.0	0.0	10.2	0.0	0.0	0.0	0.0
~~SF-3081~~	~~11233081~~	~~R-3-6~~	~~UC/US Area Management (Fed)~~	~~36.0~~	~~34.6~~	~~0.0~~	~~0.0~~	~~0.0~~	~~1.4~~	~~0.0~~	~~36.0~~	~~27.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~9.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3141	11233141	R-3-6	Kuskokwim Area Management (Fed)	36.4	34.9	0.0	0.0	0.0	1.5	0.0	36.4	27.3	0.0	0.0	0.0	9.1	0.0	0.0	0.0	0.0
SF-3161	11233161	R-3-6	Nome FED CAP	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	2.5	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0
SF-3171	11233171	R-3-6	Bethel FED CAP	0.0	0.0	0.0	0.0	6.4	0.0	0.0	6.4	4.8	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0
SF-3181	11233181	R-3-6	Delta Junction FED CAP	0.0	0.0	0.0	0.0	7.4	0.2	0.0	7.6	5.7	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0
~~SF-3191~~	~~11233191~~	~~R-3-6~~	~~Glennallen FED CAP~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~7.8~~	~~0.0~~	~~0.0~~	~~7.8~~	~~5.8~~	~~0.0~~	~~0.0~~	~~0.0~~	~~1.9~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3201	11233201	S-3-1a	AYK Salmon Studies	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3301	11233301	R-3-3a	AYK Lake Trout Studies	17.3	16.6	0.0	1.5	2.1	4.2	0.0	24.4	18.3	0.0	0.0	0.0	6.1	0.0	0.0	0.0	0.0
~~SF-3321~~	~~11233321~~	~~R-3-2d~~	~~Summit Lake Rainbow Trout~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
~~SF-3351~~	~~11233351~~	~~R-3-6~~	~~Fairbanks FED CAP~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~41.0~~	~~2.7~~	~~0.0~~	~~44.3~~	~~33.2~~	~~0.0~~	~~0.0~~	~~0.0~~	~~11.1~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3391	11233391	R-3-7	F/A Kuskokwim Sheefish	105.3	101.1	0.0	0.0	3.9	4.2	0.0	109.2	81.9	0.0	0.0	0.0	27.3	0.0	0.0	0.0	0.0
SF-3421	11233421	R-3-4c	AYK Northern Pike Studies	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3521	11233521	R-3-2c	AYK Grayling Studies	0.0	0.0	0.0	2.3	0.3	0.5	0.0	3.1	2.3	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0
SF-3551	11233551	R-3-2a	Tanana Grayling Studies	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3601~~	~~11233601~~	~~R-3-4b~~	~~Upper Copper/Susitna Lake Burbot~~	~~73.7~~	~~70.8~~	~~0.0~~	~~1.0~~	~~5.1~~	~~1.9~~	~~0.0~~	~~81.8~~	~~61.3~~	~~0.0~~	~~0.0~~	~~0.0~~	~~20.4~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3651	11233651	S-3-1e	Unalakleet Chinook Telemetry	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3671	11233671	F-10	Stocked Fisheries - Eggtake & Stocking	29.3	28.1	0.0	0.0	16.1	9.9	0.0	54.1	40.6	0.0	0.0	0.0	13.5	0.0	0.0	0.0	0.0
SF-3701	11233701	E-3-1	Stocked Fisheries - RES & MGT	219.9	211.1	0.0	0.0	9.7	17.8	0.0	238.6	179.0	0.0	0.0	0.0	59.7	0.0	0.0	0.0	0.0

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PROJECT SUMMARY REPORT WITH VACANCY FACTOR
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Project #	Ledger Code	Fed Aid Job #	Project Title	71000	71000 Less 4%	71000 Other	72000	73000	74000	75000	Total	FED	GF	I/A	EVOS	F&G	HAZ	CIP	SPR	SFEA
SF-3731	11233731	E-3-1	Lake Characteristics & Species Inventory	27.5	26.4	0.0	0.0	1.3	1.1	0.0	28.8	21.6	0.0	0.0	0.0	7.2	0.0	0.0	0.0	0.0
[illegible]																				
SF-3771	11233771	R-3-7c	Tanana Sheefish	104.7	100.5	0.0	1.2	19.3	12.0	0.0	133.0	99.8	0.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0
SF-N305	11280099	R-3-4c	Kusko R. Pike/Burbot Radiotelemetry-F/A	50.7	48.7	0.0	0.0	0.0	2.0	0.0	50.7	38.0	0.0	0.0	0.0	12.7	0.0	0.0	0.0	0.0
SF-N306		R-3-2f	Kissralik Rainbow Trout	120.9	116.1	0.0	14.2	9.0	18.1	0.0	157.4	118.0	0.0	0.0	0.0	39.3	0.0	0.0	0.0	0.0
SF-N307		R-3-1b	Resident Species Research Coordination	87.0	83.5	0.0	2.0	0.0	3.9	0.0	89.4	67.1	0.0	0.0	0.0	22.4	0.0	0.0	0.0	0.0
SF-N308		R-3-1c	Salmon Research Coordination	50.8	48.8	0.0	2.2	12.7	2.0	0.0	65.7	49.3	0.0	0.0	0.0	16.4	0.0	0.0	0.0	0.0
SF-N309		S-3-1e	Unalakleet Smolt F/A	70.5	67.7	0.0	2.8	0.0	2.8	0.0	73.1	54.8	0.0	0.0	0.0	18.3	0.0	0.0	0.0	0.0
Totals for 1 - F10 Sport Fish Investigations				1,406.1	1,349.9	0.0	31.0	150.8	109.2	0.0	1,648.9	1,230.6	0.0	0.0	0.0	410.2	0.0	0.0	0.0	0.0
2 - F13 Boating Small Access Maintenance																				
SF-0632	11230632	R-3	Sm Access Boating	79.9	76.7	0.0	1.6	10.4	10.5	0.0	99.2	74.4	0.0	0.0	0.0	24.8	0.0	0.0	0.0	0.0
Totals for 2 - F13 Boating Small Access Maintenance				79.9	76.7	0.0	1.6	10.4	10.5	0.0	99.2	74.4	0.0	0.0	0.0	24.8	0.0	0.0	0.0	0.0
30 - T10 State Wildlife Grants 65/35																				
SF-3123	11233123	P-07	Lamprey (SWG)	28.2	27.1	0.0	0.0	48.1	1.1	0.0	76.3	66.6	0.0	0.0	0.0	9.7	0.0	0.0	0.0	0.0
SF-3223	11233223	P-08	Interior Lake Assessment (SWG)	50.6	48.6	0.0	2.6	62.7	12.5	0.0	126.4	82.1	0.0	0.0	0.0	44.2	0.0	0.0	0.0	0.0
Totals for 30 - T10 State Wildlife Grants 65/35				78.8	75.6	0.0	2.6	110.8	13.6	0.0	202.6	148.7	0.0	0.0	0.0	53.9	0.0	0.0	0.0	0.0
4 - F31 Aquatic Education																				
SF-3084	11233084	AE-3-1	I&E Fisheries Education	98.4	94.5	0.0	2.2	0.0	8.4	0.0	103.1	77.3	0.0	0.0	0.0	25.8	0.0	0.0	0.0	0.0
SF-3114	11233114	AE-3-1	AYK Region I&E	157.4	151.1	0.0	1.7	1.7	6.7	0.0	161.2	120.9	0.0	0.0	0.0	40.3	0.0	0.0	0.0	0.0
Totals for 4 - F31 Aquatic Education				255.8	245.6	0.0	3.9	1.7	13.1	0.0	264.3	198.2	0.0	0.0	0.0	66.1	0.0	0.0	0.0	0.0
5 - F13 Non-Boating Small Access Maint																				
SF-0635	11230635	R-3	Sm Access Non-Boating	55.6	53.4	0.0	1.2	12.8	12.3	0.0	79.7	59.8	0.0	0.0	0.0	19.9	0.0	0.0	0.0	0.0
Totals for 5 - F13 Non-Boating Small Access Maint				55.6	53.4	0.0	1.2	12.8	12.3	0.0	79.7	59.8	0.0	0.0	0.0	19.9	0.0	0.0	0.0	0.0
7 - F13C Access Coordination																				
SF-6537	11235537	R-3	Access Coordination	91.4	87.7	0.0	1.6	4.2	4.1	0.0	97.6	73.2	0.0	0.0	0.0	24.4	0.0	0.0	0.0	0.0

Alaska Department of Fish and Game
Sport Fish
PROJECT SUMMARY REPORT WITH VACANCY FACTOR
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Project #	Ledger Code	Fed Aid Job #	Project Title	71000	71000 Less 4%	71000 Other	72000	73000	74000	75000	Total	FED	GF	I/A	EVOS	F&G	HAZ	CIP	SPR	SFEA
Totals for 7 - F13C Access Coordination				91.4	87.7	0.0	1.6	4.2	4.1	0.0	97.6	73.2	0.0	0.0	0.0	24.4	0.0	0.0	0.0	0.0
8 - Fish and Game Fund																				
[illegible]																				
[illegible]																				
SF-3048	11233048	N/A	Delta Area Management	43.6	41.8	0.0	1.7	27.4	3.7	0.0	74.6	0.0	0.0	0.0	0.0	74.6	0.0	0.0	0.0	0.0
SF-3058	11233058	N/A	AYK Area Management	21.1	20.3	0.0	5.0	8.7	4.9	0.0	38.9	0.0	0.0	0.0	0.0	38.9	0.0	0.0	0.0	0.0
SF-3068	11233068	N/A	Northwest Area Management	27.8	26.7	0.0	4.5	2.3	1.5	0.0	35.0	0.0	0.0	0.0	0.0	35.0	0.0	0.0	0.0	0.0
SF-3088	11233088	N/A	AYK Management Supervision	72.9	70.0	0.0	9.8	3.9	3.7	0.0	87.4	0.0	0.0	0.0	0.0	87.4	0.0	0.0	0.0	0.0
[illegible]																				
SF-3108	11233108	N/A	AYK Regional Administrative Services	18.1	17.4	0.0	4.1	2.6	6.6	0.0	30.7	0.0	0.0	0.0	0.0	30.7	0.0	0.0	0.0	0.0
SF-3118	11233118	N/A	F&G -AYK Region I&E	11.7	11.2	0.0	0.0	19.0	0.8	0.0	31.0	0.0	0.0	0.0	0.0	31.0	0.0	0.0	0.0	0.0
SF-3148	11233148	N/A	Kuskokwim Area Management (F&G)	72.8	69.9	0.0	8.4	4.3	12.5	0.0	95.1	0.0	0.0	0.0	0.0	95.1	0.0	0.0	0.0	0.0
[illegible]																				
SF-3168	11233168		Nome FG CAP	0.0	0.0	0.0	0.0	4.2	0.0	0.0	4.2	0.0	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0
SF-3178	11233178		Bethel FG CAP	0.0	0.0	0.0	0.0	8.2	0.0	0.0	8.2	0.0	0.0	0.0	0.0	8.2	0.0	0.0	0.0	0.0
SF-3188	11233188		Delta Junction FG CAP	0.0	0.0	0.0	0.0	9.8	0.3	0.0	9.9	0.0	0.0	0.0	0.0	9.9	0.0	0.0	0.0	0.0
[illegible]																				
SF-3238	11233238		AYK Workforce Training & Interns	9.5	9.1	0.0	7.7	6.7	0.8	0.0	24.3	0.0	0.0	0.0	0.0	24.3	0.0	0.0	0.0	0.0
[illegible]																				
[illegible]																				
SF-3308	11233308		Unalakleet Smolt-F&G Match	23.5	22.6	0.0	0.0	0.0	0.9	0.0	23.5	0.0	0.0	0.0	0.0	23.5	0.0	0.0	0.0	0.0
SF-3318	11233318		Chena Tower F&G Match	23.1	22.2	0.0	0.0	0.0	0.9	0.0	23.1	0.0	0.0	0.0	0.0	23.1	0.0	0.0	0.0	0.0
[illegible]																				
[illegible]																				
[illegible]																				
Totals for 8 - Fish and Game Fund				579.4	556.2	0.0	51.1	276.0	66.0	0.0	949.3	0.0	0.0	0.0	0.0	949.3	0.0	0.0	0.0	0.0
9 - General Fund																				
[illegible]																				
Totals for 9 - General Fund				738.2	708.7	0.0	0.0	0.0	29.5	0.0	738.2	0.0	738.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for Region 3 Interior			(63 projects)	3,285.2	3,153.8	0.0	93.0	566.7	258.3	0.0	4,071.8	1,784.9	738.2	0.0	0.0	1,548.7	0.0	0.0	0.0	0.0

Alaska Department of Fish and Game
Sport Fish
PROJECT SUMMARY REPORT
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Region 3 Interior Component: 465 SF Special Projects

Project #	Ledger Code	Fed Aid Job #	Project Title	71000	71000 Other	72000	73000	74000	75000	Total	FED	GF	IA	EVOS	F&G	HAZ	CIP	SPR	SFEA
40 - SF Special Projects																			
SF-4526	11244526	N/A	AKSSF- Chena Tower (multi)	64.6	0.0	0.5	9.9	5.6	0.0	80.7	80.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-4614	11244614		AKSSF-Unalakleet Smolt	27.9	0.0	0.0	0.0	0.0	0.0	27.9	0.0	0.0	0.0	0.0	0.0	0.0	27.9	0.0	0.0
SF-63092	11263092		Delta RSA-Support Staff Line 100 (multi)	25.4	0.0	0.0	0.0	0.0	0.0	25.4	0.0	0.0	25.4	0.0	0.0	0.0	0.0	0.0	0.0
SF-63101	11263101		AKSSF-Salmonid Aquarium	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-63103	11263103		AKSSF-Salmon in the Classroom	19.1	0.0	0.0	0.0	0.0	0.0	19.1	0.0	0.0	0.0	0.0	0.0	0.0	19.1	0.0	0.0
~~SF-63110~~	~~11263110~~		~~Glennallen Shared Maintenance (multi)~~	~~0.0~~		~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-63143	11263143		OSM-Innoko Sheefish (multi)	16.1	0.0	4.5	6.4	0.0	0.0	27.0	27.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-63144~~	~~11263144~~		~~BLM Gulkana Tower (multi)~~	~~24.5~~	~~0.0~~	~~0.0~~	~~0.0~~	~~2.5~~	~~0.0~~	~~27.0~~	~~27.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-63146	11263146		OSM-Kobuk Sheefish (multi)	0.0		3.2	2.0	4.0	0.0	9.2	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-63148~~	~~11263148~~		~~BLM-Gulkana Radio Telemetry Study~~	~~0.0~~		~~0.0~~	~~3.0~~	~~0.0~~	~~0.0~~	~~3.0~~	~~3.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-63150	11263150		OSM Kusko Sheefish Spawning (multi)	3.0	0.0	7.0	27.4	9.6	0.0	47.0	47.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-63152	11263152		Kusko NP/BB Radiotelemetry-BLM (multi)	95.3	0.0	22.2	146.0	166.7	40.0	470.2	470.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-63153	11263153		Army DTA Fish Survey (multi)	18.7	0.0	0.0	14.7	4.2	0.0	37.6	37.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-63154	11263154		BLM Unalakleet Smolt (multi)	5.5		2.6	32.0	6.2	0.0	46.3	46.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-N302~~			~~AKSSF Gulkana Tower (multi)~~	~~82.3~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~82.3~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~82.3~~	~~0.0~~	~~0.0~~
Totals for 40 - SF Special Projects				382.4	0.0	40.1	251.0	198.8	40.0	892.3	748.6	0.0	34.4	0.0	0.0	0.0	109.3	0.0	0.0
Totals for Region 3		Interior	(15 projects)	382.4	0.0	40.1	251.0	198.8	40.0	892.3	748.6	0.0	34.4	0.0	0.0	0.0	109.3	0.0	0.0

Alaska Department of Fish and Game
Sport Fish
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[redacted]																						

Region 3 Interior

Component: 464 Sport Fisheries

1 - F10 Sport Fish investigations

SF-3021	11233021	C-3-1	AYK Research Supervision	122.1	117.2	3.9	2.0	8.8	0.0	131.9	98.9	0.0	0.0	0.0	0.0	33.0	0.0	0.0	0.0	0.0	0.0	0.0
[redacted]																						
SF-3041	11233041	R-3-6	Delta Area Management (Fed)	56.0	53.8	0.0	0.0	2.2	0.0	56.0	42.0	0.0	0.0	0.0	0.0	14.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3051	11233051	R-3-6	AYK Area Management (Fed)	100.4	96.4	0.0	0.0	4.1	0.0	100.5	75.4	0.0	0.0	0.0	0.0	25.1	0.0	0.0	0.0	0.0	0.0	0.0
SF-3061	11233061	R-3-6	Northwest Area Management (Fed)	87.2	83.7	0.0	0.0	3.1	0.0	86.8	65.1	0.0	0.0	0.0	0.0	21.7	0.0	0.0	0.0	0.0	0.0	0.0
SF-3071	11233071	R-3-7b	Kobuk River Sheefish	29.8	28.6	0.0	0.0	1.2	0.0	29.8	22.4	0.0	0.0	0.0	0.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0
[redacted]																						
SF-3141	11233141	R-3-6	Kuskokwim Area Management (Fed)	94.9	91.1	0.0	0.0	3.8	0.0	94.9	71.2	0.0	0.0	0.0	0.0	23.7	0.0	0.0	0.0	0.0	0.0	0.0
SF-3161	11233161	R-3-6	Nome FED CAP	0.0	0.0	0.0	3.2	0.0	0.0	3.2	2.4	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
SF-3171	11233171	R-3-6	Bethel FED CAP	0.0	0.0	0.0	6.2	0.0	0.0	6.2	4.7	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
SF-3181	11233181	R-3-6	Delta Junction FED CAP	0.0	0.0	0.0	7.5	0.0	0.0	7.5	5.6	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0
[redacted]																						
SF-3201	11233201	S-3-1a	AYK Salmon Studies	70.2	67.4	1.4	5.9	2.8	0.0	77.5	58.1	0.0	0.0	0.0	0.0	19.4	0.0	0.0	0.0	0.0	0.0	0.0
SF-3301	11233301	R-3-3a	AYK Lake Trout Studies	120.3	115.5	2.8	7.7	10.5	0.0	136.5	102.4	0.0	0.0	0.0	0.0	34.1	0.0	0.0	0.0	0.0	0.0	0.0
[redacted]																						
[redacted]																						
SF-3391	11233391	R-3-7	F/A Kuskokwim Sheefish	66.4	63.7	0.0	3.9	2.7	0.0	70.3	52.8	0.0	0.0	0.0	0.0	17.6	0.0	0.0	0.0	0.0	0.0	0.0
SF-3421	11233421	R-3-4c	AYK Northern Pike Studies	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3521	11233521	R-3-2c	AYK Grayling Studies	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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SF-3551	11233551	R-3-2e	Tanana Grayling Studies	151.3	145.2	3.0	20.9	12.2	0.0	181.3	136.0	0.0	0.0	0.0	0.0	45.3	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3561~~	~~11233561~~	~~R-3-4b~~	~~Upper Copper/Susitna Lake Burbot~~	~~66.6~~	~~66.1~~	~~0.7~~	~~4.6~~	~~4.2~~	~~0.0~~	~~92.5~~	~~46.3~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~46.3~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3651	11233651	S-3-1e	Unalakleet Chinook Telemetry	125.7	120.7	4.0	10.1	13.9	0.0	148.7	111.5	0.0	0.0	0.0	0.0	37.2	0.0	0.0	0.0	0.0	0.0	0.0
SF-3671	11233671	F-10	Stocked Fisheries - Eggtake & Stocking	40.3	38.7	1.6	16.9	6.2	0.0	63.4	47.5	0.0	0.0	0.0	0.0	15.8	0.0	0.0	0.0	0.0	0.0	0.0
SF-3701	11233701	E-3-1	Stocked Fisheries - RES & MGT	198.2	190.3	3.0	12.9	31.1	0.0	237.3	178.0	0.0	0.0	0.0	0.0	59.3	0.0	0.0	0.0	0.0	0.0	0.0
SF-3731	11233731	E-3-1	Lake Characteristics & Species Inventory	35.6	34.2	0.0	0.0	1.4	0.0	35.6	26.7	0.0	0.0	0.0	0.0	8.9	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-N306~~		~~R-3-7b~~	~~Gulkana Radio Telemetry Study, FY~~	~~71.3~~	~~71.3~~	~~0.0~~	~~0.0~~	~~11.3~~	~~0.0~~	~~82.2~~	~~82.2~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-N307		R-3-7c	Tanana Sheefish	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 1 - F10 Sport Fish Investigations				1,528.9	1,467.7	23.0	153.5	125.6	0.0	1,769.8	1,349.9	0.0	0.0	0.0	0.0	419.9	0.0	0.0	0.0	0.0	0.0	0.0
2 - F13 Boating Small Access Maintenance																						
SF-0632	11230632	R-3	Sm Access Boating	75.7	72.7	1.4	11.3	13.1	0.0	98.5	73.9	0.0	0.0	0.0	0.0	24.6	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 2 - F13 Boating Small Access Maintenance				75.7	72.7	1.4	11.3	13.1	0.0	98.5	73.9	0.0	0.0	0.0	0.0	24.6	0.0	0.0	0.0	0.0	0.0	0.0
3 - State Wildlife Grants																						
SF-3123	11233123	P-07	Lamprey (SWG)	13.0	12.5	0.0	22.4	0.5	0.0	35.4	23.0	0.0	0.0	0.0	0.0	12.4	0.0	0.0	0.0	0.0	0.0	0.0
SF-3223	11233223	P-08	Interior Lake Assessment (SWG)	50.5	48.5	1.0	65.0	11.3	0.0	125.8	81.8	0.0	0.0	0.0	0.0	44.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 3 - State Wildlife Grants				63.5	61.0	1.0	87.4	11.8	0.0	161.2	104.8	0.0	0.0	0.0	0.0	56.4	0.0	0.0	0.0	0.0	0.0	0.0
4 - F31 Aquatic Education																						
SF-3084	11233084	AE-3-1	I&E Fisheries Education	84.7	81.3	1.1	0.0	5.4	0.0	87.8	65.9	0.0	0.0	0.0	0.0	22.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3114	11233114	AE-3-1	AYK Region I&E	159.8	153.4	0.5	1.1	6.8	0.0	161.8	121.4	0.0	0.0	0.0	0.0	40.5	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 4 - F31 Aquatic Education				244.5	234.7	1.6	1.1	12.2	0.0	249.6	187.2	0.0	0.0	0.0	0.0	62.4	0.0	0.0	0.0	0.0	0.0	0.0
5 - F13 Non-Boating Small Access Maint																						
SF-0635	11230635	R-3	Sm Access Non-Boating	52.1	50.0	1.1	12.8	15.1	0.0	79.0	59.3	0.0	0.0	0.0	0.0	19.8	0.0	0.0	0.0	0.0	0.0	0.0
SF-5537	11235537	R-3	Access Coordination	86.8	83.3	1.6	4.2	4.0	0.0	93.1	69.8	0.0	0.0	0.0	0.0	23.3	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 5 - F13 Non-Boating Small Access Maint				138.9	133.3	2.7	17.0	19.1	0.0	172.1	129.1	0.0	0.0	0.0	0.0	43.0	0.0	0.0	0.0	0.0	0.0	0.0
8 - Fish and Game Fund																						

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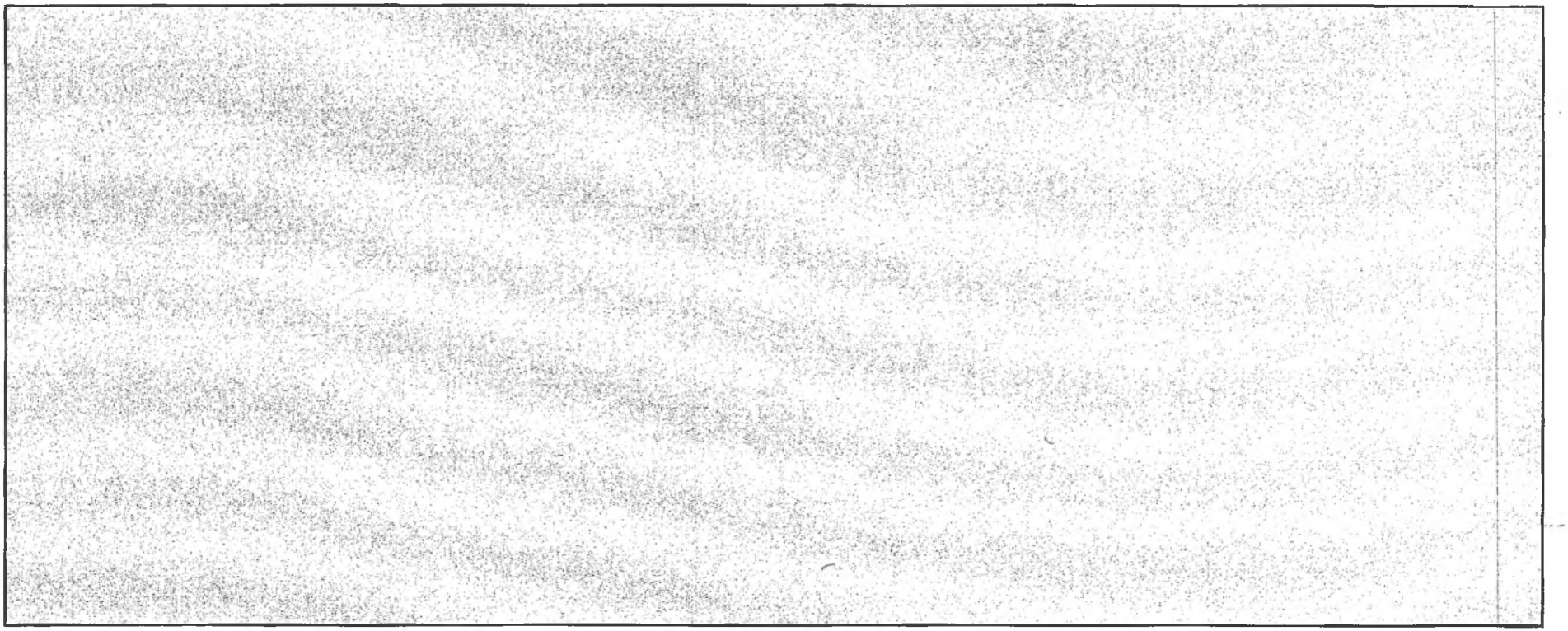
Project #	Ledger Code	Fed Aid Job #	Project Title	71000	71000 Less 4%	72000	73000	74000	75000	Total	FED	GFM	GF	IA	EVOS	F&G	CFLN	HAZ	CIP	SPR	FGND	SFEA
[redacted]																						
[redacted]																						
SF-3048	11233048	N/A	Delta Area Management	59.6	57.2	1.0	25.7	4.4	0.0	88.3	0.0	0.0	0.0	23.0	0.0	65.3	0.0	0.0	0.0	0.0	0.0	0.0
SF-3058	11233058	N/A	AYK Area Management	20.1	19.3	6.5	8.5	5.0	0.0	39.3	0.0	0.0	0.0	0.0	0.0	39.3	0.0	0.0	0.0	0.0	0.0	0.0
SF-3068	11233068	N/A	Northwest Area Management	19.6	18.8	4.9	2.2	1.7	0.0	27.6	0.0	0.0	0.0	0.0	0.0	27.6	0.0	0.0	0.0	0.0	0.0	0.0
SF-3088	11233088	N/A	AYK Management Supervision	87.3	83.8	12.1	4.4	4.9	0.0	105.2	0.0	0.0	0.0	0.0	0.0	105.2	0.0	0.0	0.0	0.0	0.0	0.0
[redacted]																						
SF-3108	11233108	N/A	AYK Regional Administrative Services	20.5	19.7	7.1	3.2	11.0	0.0	41.0	0.0	0.0	0.0	0.0	0.0	41.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3118	11233118	N/A	F&G -AYK Region I&E	13.4	12.9	0.0	19.0	1.7	0.0	33.6	0.0	0.0	0.0	0.0	0.0	33.6	0.0	0.0	0.0	0.0	0.0	0.0
SF-3148	11233148	N/A	Kuskokwim Area Management (F&G)	8.9	8.5	8.9	4.3	7.5	0.0	29.2	0.0	0.0	0.0	0.0	0.0	29.2	0.0	0.0	0.0	0.0	0.0	0.0
[redacted]																						
SF-3168	11233168		Nome FG CAP	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0
SF-3178	11233178		Bethel FG CAP	0.0	0.0	0.0	8.3	0.0	0.0	8.3	0.0	0.0	0.0	0.0	0.0	8.3	0.0	0.0	0.0	0.0	0.0	0.0
SF-3188	11233188		Delta Junction FG CAP	0.0	0.0	0.0	10.1	0.0	0.0	10.1	0.0	0.0	0.0	0.0	0.0	10.1	0.0	0.0	0.0	0.0	0.0	0.0
[redacted]																						
SF-3238	11233238		AYK Workforce Training & Interns	17.9	17.2	5.4	3.6	0.4	0.0	26.6	0.0	0.0	0.0	0.0	0.0	26.6	0.0	0.0	0.0	0.0	0.0	0.0
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[redacted]																						
SF-N304		S-3-1f	Kanektok Chinook Telemetry F&G Match	33.1	31.8	0.0	0.0	1.3	0.0	33.1	0.0	0.0	0.0	0.0	0.0	33.1	0.0	0.0	0.0	0.0	0.0	0.0
SF-N305			Klutina Sonar Feasibility F&G Match	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 8 - Fish and Game Fund				588.0	564.5	54.2	272.7	73.9	0.0	965.3	0.0	0.0	0.0	23.0	0.0	942.3	0.0	0.0	0.0	0.0	0.0	0.0
9 - General Fund																						
[redacted]																						
Totals for 9 - General Fund				603.8	579.6	0.0	0.0	24.2	0.0	603.8	0.0	0.0	603.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for Region 3	Interior		(58 projects)	3,243.3	3,113.6	83.9	543.0	279.9	0.0	4,020.4	1,844.9	0.0	603.8	23.0	0.0	1,548.7	0.0	0.0	0.0	0.0	0.0	0.0

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[redacted]																					
Region 3 Interior			**Component: 465 SF Special Projects**																		
40 - SF Special Projects																					
SF-45735	11245735		Chena R Chinook Escapement AKSSF	62.8	0.6	7.9	3.4	0.0	74.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	74.7	0.0	0.0	0.0
SF-63092	11263092		Delta RSA - Support Staff Line 100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-63142~~	~~11263142~~		~~Glennallen Shared Maintenance~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-63143	11263143		OSM-Innoko Sheefish (multi)	10.8	1.2	15.0	12.4	0.0	39.4	39.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-63144~~	~~11263144~~		~~BLM Gulkana Trout (multi)~~	~~39.1~~	~~0.0~~	~~1.0~~	~~0.0~~	~~0.0~~	~~40.1~~	~~40.1~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-63146	11263146		OSM-Kobuk Sheefish (multi)	0.0	4.0	3.3	3.7	0.0	11.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-63148~~	~~11263148~~		~~BLM Delta River Grayling (multi)~~	~~0.0~~	~~0.0~~	~~50.0~~	~~0.0~~	~~0.0~~	~~50.0~~	~~50.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-63150	11263150		OSM Kuskokwim Sheefish Spawning	7.6	7.0	27.5	15.4	0.0	57.5	57.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-N301~~			~~Ruedrich Creek Facility SSSF (multi)~~	~~39.2~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~39.2~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~39.2~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-N302			Kanektok Chinook Telemetry SSSF (multi)	20.8	0.0	0.0	0.0	0.0	20.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.8	0.0	0.0	0.0
SF-N309			Kuskokwim R Pike/Burbot Sampling	55.2	5.0	7.5	7.3	0.0	75.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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SF-N310			Kuskokwim Radiotelemetry	48.1	2.4	0.0	124.5	0.0	175.0	175.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 40 - SF Special Projects				297.1	20.2	122.3	170.6	0.0	610.2	436.0	0.0	0.0	9.5	0.0	0.0	0.0	0.0	164.7	0.0	0.0	0.0
Totals for Region 3	Interior		(12 projects)	297.1	20.2	122.3	170.6	0.0	610.2	436.0	0.0	0.0	9.5	0.0	0.0	0.0	0.0	164.7	0.0	0.0	0.0



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Region 3 Interior																						
Component: 464 Sport Fisheries																						
1 - F10 Sport Fish Investigations																						
SF-1NEW		R-3-2g	Kanektok Rainbow Trout	38.2	36.7	5.0	15.8	5.9	0.0	63.4	47.5	0.0	0.0	0.0	0.0	15.8	0.0	0.0	0.0	0.0	0.0	0.0
SF-3021	11233021	C-3-1	AYK Research Supervision	25.4	24.4	4.5	2.0	5.2	0.0	36.1	27.1	0.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3031	11233031	R-3-6	Fairbanks Area Management (Fed)	72.8	69.9	0.0	0.0	3.1	0.0	73.0	54.7	0.0	0.0	0.0	0.0	18.2	0.0	0.0	0.0	0.0	0.0	0.0
SF-3041	11233041	R-3-6	Delta Area Management (Fed)	109.8	105.4	0.0	0.0	4.3	0.0	109.7	82.3	0.0	0.0	0.0	0.0	27.4	0.0	0.0	0.0	0.0	0.0	0.0
SF-3051	11233051	R-3-6	AYK Area Management (Fed)	99.5	95.5	0.0	0.0	4.0	0.0	99.5	74.6	0.0	0.0	0.0	0.0	24.9	0.0	0.0	0.0	0.0	0.0	0.0
SF-3061	11233061	R-3-6	Northwest Area Management (Fed)	83.4	80.1	0.0	0.0	3.3	0.0	83.4	62.5	0.0	0.0	0.0	0.0	20.8	0.0	0.0	0.0	0.0	0.0	0.0
SF-3071	11233071	r-3-7b	Kobuk River Sheefish	62.4	59.9	0.0	0.0	2.8	0.0	62.7	47.0	0.0	0.0	0.0	0.0	15.7	0.0	0.0	0.0	0.0	0.0	0.0
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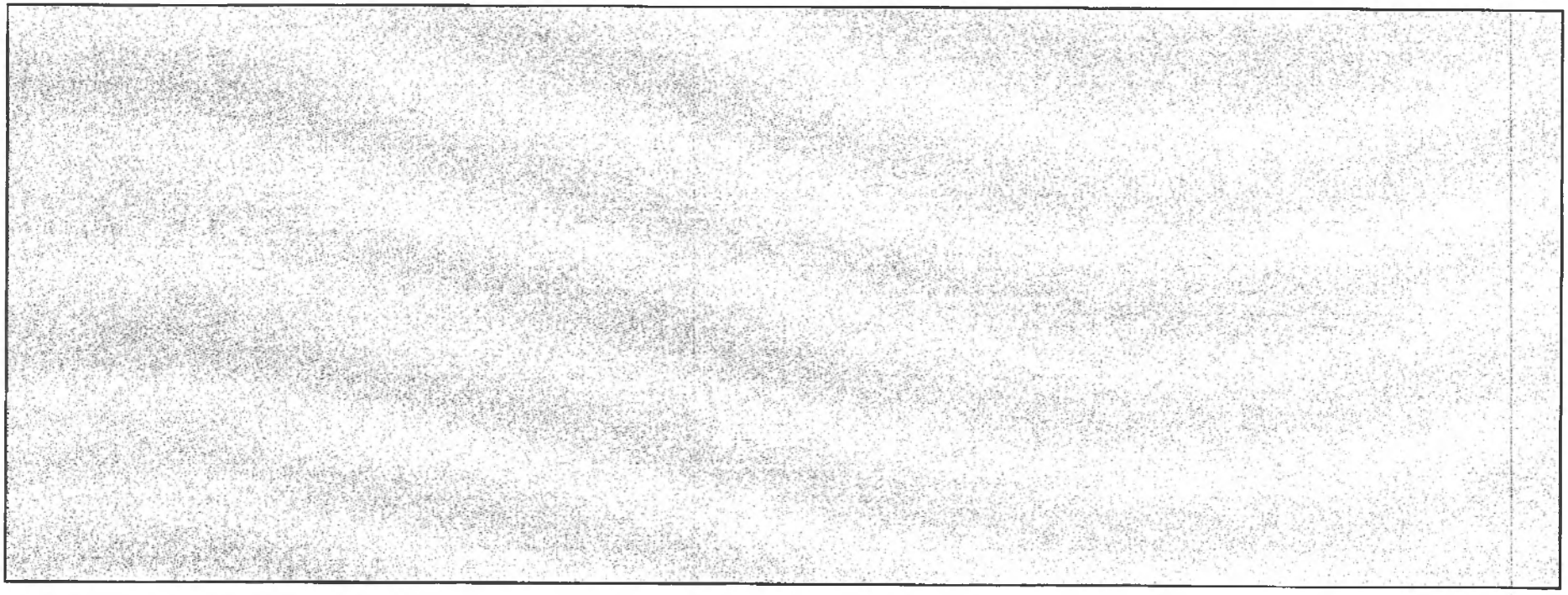
Project #	Ledger Code	Fed Aid Job #	Project Title	71000	71000 Less 4%	72000	73000	74000	75000	Total	FED	GFM	GF	IA	EVOS	F&G	CFLN	HAZ	CIP	SPR	FGND	SFEA
SF-3141	11233141	R-3-6	Kuskokwim Area Management (Fed)	80.9	77.7	0.0	0.0	3.2	0.0	80.9	60.6	0.0	0.0	0.0	0.0	20.2	0.0	0.0	0.0	0.0	0.0	0.0
SF-3161	11233161	R-3-6	Nome FED CAP	0.0	0.0	0.0	3.2	0.0	0.0	3.2	2.4	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
SF-3171	11233171	R-3-6	Bethel FED CAP	0.0	0.0	0.0	6.3	0.0	0.0	6.3	4.7	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
SF-3181	11233181	R-3-6	Delta Junction FED CAP	0.0	0.0	0.0	6.5	0.0	0.0	6.5	4.9	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3191~~	~~11233191~~	~~R-3-6~~	~~Glenallen FED CAP~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~5.6~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~1.7~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3201	11233201	S-3-1a	AYK Salmon Studies	97.3	93.4	1.2	14.2	7.7	0.0	116.5	87.4	0.0	0.0	0.0	0.0	29.1	0.0	0.0	0.0	0.0	0.0	0.0
SF-3301	11233301	R-3-3a	AYK Lake Trout Studies	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3321~~	~~11233321~~	~~R-3-3b~~	~~Upper Copper R. Coho/Rainbow Trout~~	~~13.3~~	~~14.7~~	~~2.8~~	~~19.6~~	~~0.0~~	~~0.0~~	~~76.5~~	~~54.7~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~19.8~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
~~SF-3331~~	~~11233331~~	~~R-3-6~~	~~Fairbanks FED CAP~~	~~0.0~~	~~0.0~~	~~0.0~~	~~36.3~~	~~0.0~~	~~0.0~~	~~37.7~~	~~26.9~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~9.4~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3371	11233371	R-3-2f	Aniak River Rainbow Trout	26.9	25.8	0.0	0.0	1.0	0.0	26.8	20.1	0.0	0.0	0.0	0.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0
SF-3391	11233391	R-3-7	F/A Kuskokwim Sheefish	94.9	91.1	0.0	5.0	3.8	0.0	99.9	74.9	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3421	11233421	R-3-4c	AYK Northern Pike Studies	96.6	92.7	0.0	10.6	12.3	0.0	115.6	86.7	0.0	0.0	0.0	0.0	28.9	0.0	0.0	0.0	0.0	0.0	0.0
SF-3521	11233521	R-3-2c	AYK Grayling Studies	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3551	11233551	R-3-2e	Tanana Grayling Studies	131.8	126.5	2.8	23.9	13.7	0.0	166.9	125.2	0.0	0.0	0.0	0.0	41.7	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3561~~	~~11233561~~	~~R-3-4b~~	~~Upper Copper/Susitna Lake Sample~~	~~36.7~~	~~37.3~~	~~0.0~~	~~4.5~~	~~1.1~~	~~0.0~~	~~55.1~~	~~37.5~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~16.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3651	11233651	S-3-1e	Unalakleet Chinook Telemetry	84.6	81.2	5.8	7.2	43.6	0.0	137.9	103.4	0.0	0.0	0.0	0.0	34.5	0.0	0.0	0.0	0.0	0.0	0.0
SF-3661	11233661		Chatanika Whitefish	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3701	11233701	E-3-1	Stocked Waters Evaluations	25.4	24.4	0.0	6.7	3.5	0.0	34.6	25.9	0.0	0.0	0.0	0.0	8.6	0.0	0.0	0.0	0.0	0.0	0.0
SF-3711	11233711	E-3-1	Stocked Waters Evaluation - Information	5.7	5.5	0.0	0.0	0.2	0.0	5.7	4.3	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0
SF-3721	11233721	E-3-1	Stocked Waters Evaluation - Research	180.4	173.2	1.3	16.5	6.8	0.0	197.8	148.3	0.0	0.0	0.0	0.0	49.4	0.0	0.0	0.0	0.0	0.0	0.0
SF-3731	11233731	E-3-1	Lake Characteristics & Species Inventory	64.9	62.3	0.0	0.0	4.9	0.0	67.2	50.4	0.0	0.0	0.0	0.0	16.8	0.0	0.0	0.0	0.0	0.0	0.0
SF-3916	11233671	F-10	Hatchery Egg Take & Support	36.9	35.4	5.3	1.8	18.0	0.0	60.5	45.4	0.0	0.0	0.0	0.0	15.1	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 1 - F10 Sport Fish Investigations				1,524.1	1,463.1	28.8	184.5	161.6	0.0	1,838.0	1,378.5	0.0	0.0	0.0	0.0	459.5	0.0	0.0	0.0	0.0	0.0	0.0
2 - F13 Boating Small Access Maintenance																						
SF-0632	11230632	R-3	Sm Access Boating	65.0	62.4	1.7	10.8	12.4	0.0	87.3	65.5	0.0	0.0	0.0	0.0	21.8	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 2 - F13 Boating Small Access Maintenance				65.0	62.4	1.7	10.8	12.4	0.0	87.3	65.5	0.0	0.0	0.0	0.0	21.8	0.0	0.0	0.0	0.0	0.0	0.0
3 - State Wildlife Grants																						
SF-3128	11233123	P-07	Lamprey (SWG)	6.6	6.3	0.0	0.0	0.7	0.0	7.0	3.5	0.0	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0
SF-3130	11233223	P-08	Interior Lake Assessment (SWG)	12.8	12.3	0.0	15.0	5.9	0.0	33.2	16.6	0.0	0.0	0.0	0.0	16.6	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 3 - State Wildlife Grants				19.4	18.6	0.0	15.0	6.6	0.0	40.2	20.1	0.0	0.0	0.0	0.0	20.1	0.0	0.0	0.0	0.0	0.0	0.0
4 - F31 Aquatic Education																						

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SF-3084	11233084	AE-3-1	I&E Fisheries Education	80.3	77.1	8.7	0.5	4.6	0.0	90.9	68.2	0.0	0.0	0.0	0.0	22.7	0.0	0.0	0.0	0.0	0.0	0.0
SF-3114	11233114	AE-3-1	AYK Region I&E	141.6	135.9	4.8	2.3	6.5	0.0	149.5	112.2	0.0	0.0	0.0	0.0	37.4	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 4 - F31 Aquatic Education				221.9	213.0	13.5	2.8	11.1	0.0	240.4	180.3	0.0	0.0	0.0	0.0	60.1	0.0	0.0	0.0	0.0	0.0	0.0
5 - F13 Non-Boating Small Access Maintenance																						
SF-0635	11230635	R-3	Sm Access Non-Boating	40.0	38.4	1.2	12.8	15.3	0.0	67.7	50.8	0.0	0.0	0.0	0.0	16.9	0.0	0.0	0.0	0.0	0.0	0.0
SF-5537	11235537	R-3	Access Coordination	82.3	79.0	1.6	4.0	3.7	0.0	88.3	66.2	0.0	0.0	0.0	0.0	22.1	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 5 - F13 Non-Boating Small Access Maintenanc				122.3	117.4	2.8	16.8	19.0	0.0	156.0	117.0	0.0	0.0	0.0	0.0	39.0	0.0	0.0	0.0	0.0	0.0	0.0
8 - Fish and Game Fund																						
[illegible]																						
[illegible]																						
SF-3048	11233048	N/A	Delta Area Management	66.0	63.4	1.6	24.0	4.2	0.0	93.2	0.0	0.0	0.0	20.8	0.0	72.4	0.0	0.0	0.0	0.0	0.0	0.0
SF-3058	11233058	N/A	AYK Area Management	14.2	13.6	7.2	8.5	4.7	0.0	34.0	0.0	0.0	0.0	0.0	0.0	34.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3068	11233068	N/A	Northwest Area Management	16.8	16.1	5.9	4.8	1.1	0.0	27.9	0.0	0.0	0.0	0.0	0.0	27.9	0.0	0.0	0.0	0.0	0.0	0.0
SF-3088	11233088	N/A	AYK Management Supervision	149.5	143.5	18.0	3.6	8.1	0.0	173.2	0.0	0.0	0.0	0.0	0.0	173.2	0.0	0.0	0.0	0.0	0.0	0.0
[illegible]																						
SF-3108	11233108	N/A	AYK Regional Administrative Services	17.2	16.5	9.5	3.5	10.7	0.0	40.2	0.0	0.0	0.0	0.0	0.0	40.2	0.0	0.0	0.0	0.0	0.0	0.0
SF-3118	11233118	N/A	F&G -AYK Region I&E	10.5	10.1	0.0	19.0	3.9	0.0	33.0	0.0	0.0	0.0	0.0	0.0	33.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3148	11233148	N/A	Kuskokwim Area Management	14.8	14.2	11.0	5.5	7.9	0.0	38.6	0.0	0.0	0.0	0.0	0.0	38.6	0.0	0.0	0.0	0.0	0.0	0.0
[illegible]																						
SF-3168	11233168		Nome FG CAP	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0
SF-3178	11233178		Bethel FG CAP	0.0	0.0	0.0	8.3	0.0	0.0	8.3	0.0	0.0	0.0	0.0	0.0	8.3	0.0	0.0	0.0	0.0	0.0	0.0
SF-3188	11233188		Delta Junction FG CAP	0.0	0.0	0.0	8.5	0.0	0.0	8.5	0.0	0.0	0.0	0.0	0.0	8.5	0.0	0.0	0.0	0.0	0.0	0.0
[illegible]																						
SF-3238	11233238		AYK Workforce Training & Interns	34.5	33.1	10.5	13.0	2.0	0.0	58.6	0.0	0.0	0.0	0.0	0.0	58.6	0.0	0.0	0.0	0.0	0.0	0.0
[illegible]																						
[illegible]																						
[illegible]																						
[illegible]																						
[illegible]																						
Totals for 8 - Fish and Game Fund				732.2	702.9	73.7	350.8	68.9	0.0	1,196.3	0.0	0.0	0.0	20.8	0.0	1,175.6	0.0	0.0	0.0	0.0	0.0	0.0

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9 - General Fund																						
~~SF-3003~~	~~11233003~~	~~N/A~~	~~SF Rlll GF 71000 Supp~~	~~527.3~~	~~506.2~~	~~0.0~~	~~0.0~~	~~20.3~~	~~0.0~~	~~526.5~~	~~0.0~~	~~0.0~~	~~526.5~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
Totals for 9 - General Fund				527.3	506.2	0.0	0.0	20.3	0.0	526.5	0.0	0.0	526.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for Region 3	Interior		(59 projects)	3,212.2	3,083.7	120.5	580.7	299.9	0.0	4,084.8	1,761.4	0.0	526.5	20.8	0.0	1,776.1	0.0	0.0	0.0	0.0	0.0	0.0



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Region 3 Interior Component: 465 SF Special Projects

Project #	Ledger Code	Fed Aid Job #	Project Title	71000	72000	73000	74000	75000	Total	FED	GFM	GF	IA	EVOS	F&G	CFLN	HAZ	CIP	SPR	FGND	SFEA
40 - SF Special Projects																					
~~SF-3NEW~~	~~11245059~~		~~Copper River Sockeye Radio Telemetry~~	~~10.6~~	~~0.0~~	~~0.0~~	~~0.4~~	~~0.0~~	~~11.0~~	~~11.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
~~SF-3099~~	~~11263144~~		~~BLM Gulkana Trainer (multi)~~	~~58.1~~	~~0.0~~	~~4.2~~	~~45.8~~	~~0.0~~	~~78.2~~	~~78.2~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3092	11263092		Delta RSA - Support Staff Line 100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3148~~	~~11263148~~		~~Glennallen Shared Maintenance~~	~~0.0~~	~~0.0~~	~~9.5~~	~~0.0~~	~~0.0~~	~~9.5~~	~~0.0~~	~~0.0~~	~~0.0~~	~~9.5~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3133	11263105		OSM Kuskokwim River Sheefish (multi)	5.3	5.3	26.8	6.7	0.0	44.1	44.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3136			BLM Birch Creek No Pike (multi)	0.0	0.0	0.0	50.0	0.0	50.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3137	11263137		OSM Anlak River Rainbow Trout (multi)	0.0	5.3	12.0	0.0	0.0	17.3	17.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3143	11263143		OSM-Innoko Sheefish (multi)	7.5	1.2	15.0	12.3	0.0	36.0	36.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3145~~	~~11263145~~		~~OSM Copper/Tanada Burbot (multi)~~	~~5.7~~	~~0.0~~	~~0.0~~	~~2.7~~	~~0.0~~	~~8.4~~	~~8.4~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3146	11263146		OSM-Kobuk Sheefish (multi)	0.0	12.2	12.0	51.8	0.0	76.0	76.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-5057	11245057		AYK Ecology Chinook SSSF (multi)	14.9	1.2	1.0	6.8	0.0	23.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.9	0.0	0.0	0.0
SF7-NEW			BLM-Delta River Grayling (multi)	0.0	0.0	50.0	0.0	0.0	50.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 40 - SF Special Projects				102.1	25.2	130.6	146.5	0.0	404.4	371.0	0.0	0.0	9.5	0.0	0.0	0.0	0.0	23.9	0.0	0.0	0.0
Totals for Region 3	Interior		(12 projects)	102.1	25.2	130.6	146.5	0.0	404.4	371.0	0.0	0.0	9.5	0.0	0.0	0.0	0.0	23.9	0.0	0.0	0.0

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[redacted]																						
Region 3 Interior																						
1 - F10 Sport Fish Investigations																						
SF-1NEW			Unalakleet Chinook Telemetry	4.0	3.8	2.4	2.8	33.9	0.0	42.9	32.2	0.0	0.0	0.0	0.0	10.7	0.0	0.0	0.0	0.0	0.0	0.0
SF-2NEW	↓		Kobuk River Sheefish	63.8	61.2	0.0	0.0	2.3	0.0	63.5	47.7	0.0	0.0	0.0	0.0	15.9	0.0	0.0	0.0	0.0	0.0	0.0
SF-3021	11233021	C-3-1	AYK Research Supervision	24.8	23.8	4.0	2.0	11.8	0.0	41.6	31.2	0.0	0.0	0.0	0.0	10.4	0.0	0.0	0.0	0.0	0.0	0.0
[redacted]																						
SF-3041	11233041	R-3-6	Delta Area Management (Fed)	108.0	103.7	0.0	0.0	4.0	0.0	107.7	80.8	0.0	0.0	0.0	0.0	26.9	0.0	0.0	0.0	0.0	0.0	0.0
SF-3051	11233051	R-3-6	AYK Area Management (Fed)	93.2	89.5	0.0	0.0	3.5	0.0	93.0	69.7	0.0	0.0	0.0	0.0	23.2	0.0	0.0	0.0	0.0	0.0	0.0
SF-3061	11233061	R-3-6	Northwest Area Management (Fed)	81.2	78.0	0.0	0.0	3.1	0.0	81.1	60.8	0.0	0.0	0.0	0.0	20.3	0.0	0.0	0.0	0.0	0.0	0.0
[redacted]																						
SF-3141	11233141	R-3-6	Kuskokwim Area Management (Fed)	75.2	72.2	0.0	0.0	2.9	0.0	75.1	56.3	0.0	0.0	0.0	0.0	18.8	0.0	0.0	0.0	0.0	0.0	0.0
SF-3161	11233161	R-3-6	Nome FED CAP	0.0	0.0	0.0	2.0	0.0	0.0	2.0	1.5	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
SF-3171	11233171	R-3-6	Bethel FED CAP	0.0	0.0	0.0	5.0	0.0	0.0	5.0	3.8	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0
SF-3181	11233181	R-3-6	Delta Junction FED CAP	0.0	0.0	0.0	4.2	0.9	0.0	5.1	3.8	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0
[redacted]																						
SF-3201	11233201	S-3-1a	AYK Salmon Studies	94.2	90.4	1.4	11.8	8.3	0.0	111.7	83.8	0.0	0.0	0.0	0.0	27.9	0.0	0.0	0.0	0.0	0.0	0.0

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SF-3301	11233301	R-3-3a	AYK Lake Trout Studies	61.9	59.4	0.0	8.4	30.8	0.0	98.6	74.0	0.0	0.0	0.0	0.0	24.7	0.0	0.0	0.0	0.0	0.0	0.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SF-3371	11233371	R-3-2f	Aniak River Rainbow Trout	62.3	59.8	9.2	8.8	8.5	0.0	86.3	64.7	0.0	0.0	0.0	0.0	21.6	0.0	0.0	0.0	0.0	0.0	0.0
SF-3391	11233391	R-3-7	F/A Kuskokwim Sheefish	90.5	86.9	3.8	0.0	5.9	0.0	96.6	72.4	0.0	0.0	0.0	0.0	24.1	0.0	0.0	0.0	0.0	0.0	0.0
SF-3421	11233421	R-3-4c	AYK Northern Pike Studies	73.6	70.7	3.0	12.4	10.0	0.0	96.1	72.0	0.0	0.0	0.0	0.0	24.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3521	11233521	R-3-2c	AYK Grayling Studies	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3551	11233551	R-3-2e	Tanana Grayling Studies	135.5	130.1	2.5	23.5	13.3	0.0	169.4	127.0	0.0	0.0	0.0	0.0	42.3	0.0	0.0	0.0	0.0	0.0	0.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SF-3701	11233701	E-3-1	Stocked Waters Evaluations	25.1	24.1	0.0	6.7	3.5	0.0	34.3	25.7	0.0	0.0	0.0	0.0	8.6	0.0	0.0	0.0	0.0	0.0	0.0
SF-3711	11233711	E-3-1	Stocked Waters Evaluation - Information	5.3	5.1	0.0	0.0	0.2	0.0	5.3	4.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0
SF-3721	11233721	E-3-1	Stocked Waters Evaluation - Research	183.8	176.4	1.3	12.7	10.6	0.0	201.0	150.8	0.0	0.0	0.0	0.0	50.3	0.0	0.0	0.0	0.0	0.0	0.0
SF-3731	11233731	E-3-1	Lake Characteristics & Species Inventory	61.8	59.3	0.0	0.9	2.7	0.0	62.9	47.2	0.0	0.0	0.0	0.0	15.7	0.0	0.0	0.0	0.0	0.0	0.0
SF-3916	11000000	F-10	Hatchery Egg Take & Support	35.7	34.3	5.3	1.8	16.6	0.0	58.0	43.5	0.0	0.0	0.0	0.0	14.5	0.0	0.0	0.0	0.0	0.0	0.0
SF-3NEW			Chatanika Whitefish	17.2	16.5	0.0	0.0	4.6	0.0	21.1	15.8	0.0	0.0	0.0	0.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 1 - F10 Sport Fish Investigations				1,538.4	1,476.9	37.4	147.5	197.1	0.0	1,858.9	1,394.1	0.0	0.0	0.0	0.0	464.7	0.0	0.0	0.0	0.0	0.0	0.0
2 - F13 Boating Small Access Maintenance																						
SF-0832	11230632	R-3	Sm Access Boating	60.9	58.5	1.7	10.8	12.5	0.0	83.5	62.6	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 2 - F13 Boating Small Access Maintenance				60.9	58.5	1.7	10.8	12.5	0.0	83.5	62.6	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	0.0	0.0
3 - State Wildlife Grants																						
SF-3128	11263128	P-07	Lamprey (SWG)	6.1	5.9	0.0	0.3	0.3	0.0	6.5	3.2	0.0	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0
SF-3130	11263130	P-08	Interior Lake Assessment (SWG)	19.3	18.5	0.0	8.8	4.8	0.0	32.1	16.1	0.0	0.0	0.0	0.0	16.1	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 3 - State Wildlife Grants				25.4	24.4	0.0	9.1	5.1	0.0	38.6	19.3	0.0	0.0	0.0	0.0	19.3	0.0	0.0	0.0	0.0	0.0	0.0
4 - F31 Aquatic Education																						
SF-3084		AE-3-1	I&E Fisheries Education	75.0	72.0	8.7	0.5	4.8	0.0	86.0	64.5	0.0	0.0	0.0	0.0	21.5	0.0	0.0	0.0	0.0	0.0	0.0
SF-3114	11239104	AE-3-1	AYK Region I&E	137.7	132.2	5.3	4.5	3.6	0.0	145.6	109.2	0.0	0.0	0.0	0.0	36.4	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 4 - F31 Aquatic Education				212.7	204.2	14.0	5.0	8.4	0.0	231.6	173.7	0.0	0.0	0.0	0.0	57.9	0.0	0.0	0.0	0.0	0.0	0.0
40 - Sport Fisheries																						

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~~SF-3088~~	~~11233088~~		~~BLM Beluga Tower (multi)~~	~~33.1~~	~~33.0~~	~~0.0~~	~~4.7~~	~~5.0~~	~~0.0~~	~~47.1~~	~~47.1~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3092	11253092		Delta RSA - Support Staff Line 100	0.0	0.0	0.0	35.4	0.0	0.0	35.4	26.8	0.0	0.0	0.0	0.0	8.9	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3118~~	~~11233118~~		~~Sportfish Shared Maintenance~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3124	11263124		OSM Ivishak Dolly Varden (multi)	2.7	2.6	1.3	23.1	5.1	0.0	32.1	32.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3133	11263105		OSM Kuskokwim River Sheefish (multi)	16.9	16.2	5.1	33.5	18.7	0.0	73.5	73.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3136			BLM Birch Creek No Pike (multi)	0.0	0.0	0.0	4.7	7.4	0.0	12.1	12.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3137			OSM Aniak River Rainbow Trout (multi)	0.0	0.0	0.0	10.9	20.1	22.0	53.0	53.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-5498	11245498		AYK Ecology Chinook SSSF (multi)	8.5	8.2	0.0	0.0	0.0	0.0	8.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.2	0.0	0.0	0.0
SF4-NEW			OSM-Kobuk Sheefish (multi)	0.0	0.0	8.0	15.0	68.1	0.0	91.1	91.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF5-NEW			OSM-Innoko Sheefish (multi)	9.0	8.6	1.9	24.3	13.0	0.0	47.8	47.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
~~SF6-NEW~~			~~OSM Copper Tributary Salmon (multi)~~	~~3.6~~	~~3.7~~	~~0.0~~	~~3.2~~	~~1.1~~	~~0.0~~	~~10.9~~	~~10.9~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~5.2~~	~~0.0~~	~~0.0~~	~~5.2~~	~~0.0~~	~~0.0~~	~~0.0~~
SF7-NEW			BLM-Delta River Grayling (multi)	0.0	0.0	0.0	26.0	31.8	0.0	57.8	57.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 40 - Sport Fisheries				81.1	77.9	16.3	185.8	174.4	22.0	476.4	451.3	0.0	0.0	8.0	0.0	8.9	0.0	0.0	8.2	0.0	0.0	0.0
5 - F13 Non-Boating Small Access Maintenance																						
SF-3635	11230635	R-3	Sm Access Non-Boating	37.3	35.8	1.2	12.8	15.3	0.0	65.1	48.8	0.0	0.0	0.0	0.0	16.3	0.0	0.0	0.0	0.0	0.0	0.0
SF-5537	11235537	R-3	Access Coordination	77.5	74.4	1.6	4.0	3.7	0.0	83.7	62.8	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 5 - F13 Non-Boating Small Access Maintenance				114.8	110.2	2.8	16.8	19.0	0.0	148.8	111.6	0.0	0.0	0.0	0.0	37.2	0.0	0.0	0.0	0.0	0.0	0.0
8 - Fish and Game Fund																						
~~SF-10NEW~~	~~11[illegible]~~		~~Chitina Permits~~	~~11.1~~	~~10.7~~	~~1.0~~	~~0.0~~	~~1.9~~	~~0.0~~	~~13.6~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~13.6~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
~~SF-3053~~	~~11233053~~	~~N/A~~	~~R S Support Non~~	~~72.7~~	~~69.8~~	~~0.1~~	~~0.0~~	~~0.0~~	~~0.0~~	~~69.9~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~69.9~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
~~SF-3083~~	~~11233083~~	~~N/A~~	~~Palisades Area Management~~	~~19.1~~	~~18.7~~	~~1.0~~	~~0.0~~	~~1.0~~	~~0.0~~	~~21.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~21.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3048	11233048	N/A	Delta Area Management	15.4	14.8	1.1	48.2	2.4	0.0	66.5	0.0	0.0	0.0	0.0	0.0	66.5	0.0	0.0	0.0	0.0	0.0	0.0
SF-3058	11233058	N/A	AYK Area Management	18.6	17.9	7.2	8.5	4.8	0.0	38.4	0.0	0.0	0.0	0.0	0.0	38.4	0.0	0.0	0.0	0.0	0.0	0.0
SF-3068	11233068	N/A	Northwest Area Management	16.2	15.6	5.5	3.3	1.5	0.0	26.9	0.0	0.0	0.0	0.0	0.0	26.9	0.0	0.0	0.0	0.0	0.0	0.0
SF-3088	11233088	N/A	AYK Management Supervision	163.8	157.2	10.0	6.3	17.9	0.0	191.4	0.0	0.0	0.0	0.0	0.0	191.4	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3093~~	~~11233093~~	~~N/A~~	~~USFWS Area Management~~	~~73.6~~	~~68.8~~	~~1.0~~	~~51.0~~	~~4.6~~	~~0.0~~	~~125.6~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~125.6~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3108	11233108	N/A	AYK Regional Administrative Services	9.9	9.5	4.2	0.6	10.0	0.0	24.3	0.0	0.0	0.0	0.0	0.0	24.3	0.0	0.0	0.0	0.0	0.0	0.0
SF-3118	11233118	N/A	F&G -AYK Region I&E	15.1	14.5	0.0	18.5	4.3	0.0	37.3	0.0	0.0	0.0	0.0	0.0	37.3	0.0	0.0	0.0	0.0	0.0	0.0
SF-3148	11233148	N/A	Kuskokwim Area Management	15.6	15.0	11.0	5.5	7.9	0.0	39.4	0.0	0.0	0.0	0.0	0.0	39.4	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3158~~	~~11233158~~		~~Fallbrook FG CAP~~	~~0.0~~	~~0.0~~	~~0.0~~	~~10.0~~	~~1.0~~	~~0.0~~	~~11.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~11.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3168	11233168		Nome FG CAP	0.0	0.0	0.0	3.8	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0

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SF-3178	11233178		Bethel FG CAP	0.0	0.0	0.0	9.6	0.0	0.0	9.6	0.0	0.0	0.0	0.0	0.0	9.6	0.0	0.0	0.0	0.0	0.0	0.0
SF-3188	11233188		Delta Junction FG CAP	0.0	0.0	0.0	8.0	1.8	0.0	9.8	0.0	0.0	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	0.0
[illegible]																						
[illegible]																						
SF-3238			AYK Workforce Training & Interns	42.8	41.1	9.8	13.7	1.9	0.0	66.5	0.0	0.0	0.0	0.0	0.0	66.5	0.0	0.0	0.0	0.0	0.0	0.0
[illegible]																						
[illegible]																						
Totals for 8 - Fish and Game Fund				639.8	614.2	66.4	409.4	77.6	0.0	1,167.6	0.0	0.0	0.0	0.0	0.0	1,167.3	0.0	0.0	0.3	0.0	0.0	0.0
9 - General Fund																						
[illegible]										453.8												
Totals for 9 - General Fund				478.2	459.1	0.0	7.0	0.0	0.0	466.1	0.0	0.0	466.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for Region 3	Interior	(69	projects)	3,151.3	3,025.2	138.6	791.4	494.1	22.0	4,471.3	2,212.7	0.0	466.1	8.0	0.0	1,776.1	0.0	0.0	8.5	0.0	0.0	0.0

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Region 3 Interior

1 - F10 Sport Fish Investigations

~~SF-3021~~	~~11233021~~	~~S-3-1~~	~~AYK Research Supervision~~	~~174.0~~	~~167.3~~	~~4.8~~	~~1.7~~	~~51.1~~	~~0.0~~	~~224.6~~	~~169.5~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~56.2~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
~~SF-3031~~	~~11233031~~	~~R-3-6~~	~~Fairbanks Area Management (Fed)~~	~~77.4~~	~~74.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~74.0~~	~~56.7~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~18.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3041	11233041	R-3-6	Delta Area Management (Fed)	97.0	93.1	0.0	0.0	0.0	0.0	93.1	69.8	0.0	0.0	0.0	0.0	23.3	0.0	0.0	0.0	0.0	0.0	0.0
SF-3051	11233051	R-3-6	AYK Area Management (Fed)	86.1	82.7	0.0	0.0	0.0	0.0	82.7	62.0	0.0	0.0	0.0	0.0	20.7	0.0	0.0	0.0	0.0	0.0	0.0
SF-3061	11233061	R-3-6	Northwest Area Management (Fed)	75.3	72.3	0.0	0.0	0.0	0.0	72.3	54.2	0.0	0.0	0.0	0.0	18.1	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3091~~	~~11233091~~	~~R-3-6~~	~~UCRB Area Management (Fed)~~	~~89.2~~	~~85.6~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~85.6~~	~~64.2~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~21.4~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3121	11233121	S-3-1c	Chena River Chinook Habitat Evaluation	18.7	18.0	0.0	4.3	3.5	0.0	25.8	19.3	0.0	0.0	0.0	0.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0

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~~SF-3131~~	~~11260131~~	~~C-3-1d~~	~~Klutina River Creel Survey~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3141	11233141	R-3-6	Kuskokwim Area Management (Fed)	69.2	66.4	0.0	0.0	0.0	0.0	66.4	49.8	0.0	0.0	0.0	0.0	16.6	0.0	0.0	0.0	0.0	0.0	0.0
SF-3151	11233151	C-3-1	AYK Workforce Training & Interns	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3161	11233161		Nome FED CAP	0.0	0.0	0.0	1.5	0.0	0.0	1.5	1.1	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
SF-3171	11233171		Bethel FED CAP	0.0	0.0	0.0	5.8	0.0	0.0	5.8	4.4	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0
SF-3181	11233181		Delta Junction FED CAP	0.0	0.0	0.0	3.1	0.0	0.0	3.1	2.3	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3191~~	~~11233191~~		~~Glennallen FED CAP~~	~~0.0~~	~~0.0~~	~~0.0~~	~~5.8~~	~~0.0~~	~~0.0~~	~~5.8~~	~~1.4~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~1.6~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3201	11233201	S-3-1a	AYK Salmon Studies	151.0	145.0	2.2	11.7	3.9	0.0	162.8	122.1	0.0	0.0	0.0	0.0	40.7	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3271~~	~~11260271~~	~~C-3-1b~~	~~Copper River Salmon~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3301	11233301	R-3-3a	AYK Lake Trout Studies	48.7	46.8	0.0	8.7	1.5	0.0	57.0	42.7	0.0	0.0	0.0	0.0	14.2	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3321~~	~~11233321~~	~~R-3-2d~~	~~Upper Copper R Steelhead/Rainbow Trout~~	~~71.1~~	~~68.3~~	~~2.0~~	~~23.2~~	~~8.4~~	~~0.0~~	~~199.9~~	~~75.6~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~26.2~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
~~SF-3331~~	~~11233331~~		~~Fairbanks FED CAP~~	~~0.0~~	~~0.0~~	~~0.0~~	~~16.6~~	~~0.0~~	~~0.0~~	~~16.6~~	~~12.5~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~4.2~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3371	11233371	R32f	Anlak River Rainbow Trout	4.0	3.8	3.2	2.0	2.2	0.0	11.2	8.4	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0
SF-3381	11233381	S31d	Niukluk River Creel	26.5	25.4	1.5	3.5	5.6	0.0	36.0	27.0	0.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3391	11233391	R37	F/A Kuskokwim Sheefish	85.2	81.8	0.9	2.8	1.3	0.0	86.8	65.1	0.0	0.0	0.0	0.0	21.7	0.0	0.0	0.0	0.0	0.0	0.0
SF-3421	11233421	R-3-4c	AYK Northern Pike Studies	74.7	71.7	1.4	3.2	13.8	0.0	90.1	67.6	0.0	0.0	0.0	0.0	22.5	0.0	0.0	0.0	0.0	0.0	0.0
SF-3521	11233521	R-3-2c	AYK Grayling Studies	27.0	25.9	2.5	0.2	4.1	0.0	32.7	24.5	0.0	0.0	0.0	0.0	8.2	0.0	0.0	0.0	0.0	0.0	0.0
SF-3551	11233551	R-3-2e	Tanana Grayling Studies	121.7	116.8	2.6	19.2	11.2	0.0	149.8	112.4	0.0	0.0	0.0	0.0	37.5	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3561~~	~~11260561~~	~~R-3-1b~~	~~Upper Copper/[illegible] Lake Burbot~~	~~58.8~~	~~56.7~~	~~0.8~~	~~6.8~~	~~2.5~~	~~0.0~~	~~69.8~~	~~44.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~15.8~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3701	11233701	E-3-1	Stocked Waters Evaluations	25.4	24.4	0.0	9.4	1.7	0.0	35.5	26.6	0.0	0.0	0.0	0.0	8.9	0.0	0.0	0.0	0.0	0.0	0.0
SF-3711	11233711	E-3-1	Stocked Waters Evaluation - Information	5.4	5.2	0.0	0.0	0.0	0.0	5.2	3.9	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0
SF-3721	11233721	E-3-1	Stocked Waters Evaluation - Research	175.9	168.9	1.3	12.7	3.8	0.0	186.7	140.0	0.0	0.0	0.0	0.0	46.7	0.0	0.0	0.0	0.0	0.0	0.0
SF-3731	11233731	E-3-1	Lake Characteristics & Species Inventory	55.6	53.4	0.0	6.4	2.3	0.0	62.1	46.6	0.0	0.0	0.0	0.0	15.5	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 1 - F10 Sport Fish Investigations				1,611.9	1,547.4	23.2	146.7	116.9	0.0	1,834.2	1,375.7	0.0	0.0	0.0	0.0	458.6	0.0	0.0	0.0	0.0	0.0	0.0
2 - F13 Boating Small Access Maintenance																						
SF-0632	11230632	R-3	Sm Access Boating	61.9	59.4	1.6	11.6	6.8	0.0	79.4	59.6	0.0	0.0	0.0	0.0	19.8	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 2 - F13 Boating Small Access Maintenance				61.9	59.4	1.6	11.6	6.8	0.0	79.4	59.6	0.0	0.0	0.0	0.0	19.9	0.0	0.0	0.0	0.0	0.0	0.0
3 - State Wildlife Grants																						
SF-3128	11263128		Lamprey (SWG)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3129~~	~~11263129~~		~~Tazlina Burbot (SWG)~~	~~6.5~~	~~6.2~~	~~0.0~~	~~0.0~~	~~1.0~~	~~0.0~~	~~7.2~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~7.2~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3130	11263130		Interior Lake Assessment (SWG)	27.2	26.1	0.0	2.3	1.2	0.0	29.6	14.8	0.0	0.0	0.0	0.0	14.8	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 3 - State Wildlife Grants				33.7	32.4	0.0	2.3	2.2	0.0	36.9	18.4	0.0	0.0	0.0	0.0	18.4	0.0	0.0	0.0	0.0	0.0	0.0

Alaska Department of Fish and Game
Sport Fish
PROJECT SUMMARY REPORT WITH VACANCY FACTOR
FY2008 Allocation

Project #	Ledger Code	Fed Aid Job #	Project Title	71000	71000 Less 4%	72000	73000	74000	75000	Total	FED	GFMI	GF	IA	EVOS	F&G	CFLN	HAZ	CIP	SPR	FGND	SFEA
4 - F31 Aquatic Education																						
SF-3084		AE-3-1	I&E Fisheries Education	82.3	79.0	5.6	0.0	0.8	0.0	85.4	64.1	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	0.0	0.0
SF-3114		AE-3-1	AYK Region I&E	124.6	119.6	4.8	5.5	4.9	0.0	134.8	101.1	0.0	0.0	0.0	0.0	33.7	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 4 - F31 Aquatic Education				206.9	198.6	10.4	5.5	5.7	0.0	220.2	165.2	0.0	0.0	0.0	0.0	55.1	0.0	0.0	0.0	0.0	0.0	0.0
40 - Sport Fisheries																						
~~SF-3035~~			~~SSSF Copper River Northern Pike~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
~~SF-3060~~	~~11260060~~		~~BLM Gulkana Tower (multi)~~	~~37.0~~	~~33.9~~	~~0.0~~	~~5.2~~	~~5.0~~	~~0.0~~	~~43.9~~	~~43.9~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3092	11263092		Delta RSA - Support Staff Line 100	0.0	0.0	0.0	35.4	0.0	0.0	35.4	26.6	0.0	0.0	0.0	0.0	8.9	0.0	0.0	0.0	0.0	0.0	0.0
SF-3097	11263097		BLM Unalakleet Rvr Coho Abundance(multi)	0.0	0.0	0.0	5.0	30.5	0.0	35.5	35.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3102	11263102		OSM Kuskowkim Chinook II	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3103	11263103		OSM Unalakleet River Coho	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3104~~	~~11263104~~		~~OSM Copper River Sockeye (multi)~~	~~12.0~~	~~12.1~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~12.1~~	~~12.1~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
~~SF-3106~~	~~11263106~~		~~OSM Copper River Steelhead (multi)~~	~~12.5~~	~~12.0~~	~~0.0~~	~~0.5~~	~~0.0~~	~~0.0~~	~~12.5~~	~~12.5~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
~~SF-3115~~	~~11263708~~		~~NPS Copper River Steelhead (multi)~~	~~0.0~~	~~0.0~~	~~0.0~~	~~2.1~~	~~15.9~~	~~0.0~~	~~18.0~~	~~18.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
~~SF-3116~~	~~11263116~~		~~Chinook Shared Maintenance~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
~~SF-3120~~	~~11263120~~		~~BLM Copper River Steelhead (multi)~~	~~0.0~~	~~0.0~~	~~0.0~~	~~5.4~~	~~17.0~~	~~0.0~~	~~22.3~~	~~22.3~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3124	11263124		OSM Mishak Dolly Varden (multi)	2.6	2.5	0.0	20.9	3.2	0.0	26.6	26.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3125~~	~~11263125~~		~~OSM Copper River Sockeye (multi)~~	~~12.0~~	~~12.1~~	~~0.0~~	~~1.8~~	~~0.0~~	~~0.0~~	~~14.2~~	~~14.2~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3133	11263105		OSM Kuskokwim River Sheefish (multi)	36.6	35.1	13.4	45.9	45.0	0.0	139.4	139.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3134			Unalakleet Coho Telemetry-AYK SSI(multi)	50.0	48.0	8.0	21.8	61.1	0.0	138.9	138.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3135~~			~~OSM Shotgunning Counting Tower (multi)~~	~~96.5~~	~~96.5~~	~~8.5~~	~~19.5~~	~~25.5~~	~~0.0~~	~~166.7~~	~~166.7~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3136			BLM Birch Creek No Pike (multi)	0.0	0.0	0.0	4.7	7.4	0.0	12.1	12.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3137			OSM Aniak River Rainbow Trout (multi)	58.3	56.0	8.0	17.4	33.8	0.0	115.2	115.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-5498	11245498		AYK Ecology Chinook SSSF (multi)	4.7	4.5	0.0	0.0	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0	0.0
Totals for 40 - Sport Fisheries				281.3	270.0	34.4	187.8	260.3	0.0	742.5	721.2	0.0	0.0	8.0	0.0	8.9	0.0	0.0	4.5	0.0	0.0	0.0
5 - F13 Non-Boating Small Access Maintenance																						
SF-0635	11230635	R-3	Sm Access Non-Boating	43.5	41.8	0.8	7.6	2.5	0.0	52.7	39.5	0.0	0.0	0.0	0.0	13.2	0.0	0.0	0.0	0.0	0.0	0.0
SF-5537	11235537	R-3	Access Coordination	86.5	83.0	1.6	3.3	0.5	0.0	88.4	66.3	0.0	0.0	0.0	0.0	22.1	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 5 - F13 Non-Boating Small Access Maintenance				130.0	124.8	2.4	10.9	3.0	0.0	141.1	105.8	0.0	0.0	0.0	0.0	35.3	0.0	0.0	0.0	0.0	0.0	0.0

Alaska Department of Fish and Game
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FY2008 Allocation

Project #	Ledger Code	Fed Aid Job #	Project Title	71000	71000 Less 4%	72000	73000	74000	75000	Total	FED	GFM	GF	IA	EVOS	F&G	CFLN	HAZ	CIP	SPR	FGND	SFEA
6 - F32 Hatchery																						
SF-3916	11233916	F-3-2	Hatchery Egg Take & Support	63.7	61.2	3.9	22.1	26.5	0.0	113.7	85.2	0.0	0.0	0.0	0.0	28.4	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-399V~~		~~F-3-2~~	~~Region III Hatchery Vacancy Factor~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3936	11233936	F-3-2	Fairbanks Hatchery Operations	96.1	92.3	0.0	0.0	13.0	0.0	105.3	78.9	0.0	0.0	0.0	0.0	26.3	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 6 - F32 Hatchery				159.8	153.4	3.9	22.1	39.5	0.0	218.9	164.2	0.0	0.0	0.0	0.0	54.7	0.0	0.0	0.0	0.0	0.0	0.0
8 - Fish and Game Fund																						
~~SF-3068~~	~~11233068~~	~~N/A~~	~~R-3 Supervision~~	~~121.0~~	~~116.2~~	~~8.1~~	~~55.3~~	~~14.6~~	~~0.0~~	~~194.2~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~194.2~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
~~SF-3036~~	~~11233036~~	~~N/A~~	~~Fairbanks Area Management~~	~~1.7~~	~~1.6~~	~~1.2~~	~~0.2~~	~~1.0~~	~~0.0~~	~~10.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~10.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3048	11233048	N/A	Delta Area Management	18.1	17.4	1.3	45.2	1.1	0.0	65.0	0.0	0.0	0.0	0.0	0.0	65.0	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3058~~	~~11233058~~	~~N/A~~	~~AYK Area Management~~	~~20.5~~	~~19.7~~	~~7.3~~	~~8.4~~	~~4.1~~	~~0.0~~	~~39.5~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~39.5~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3068	11233068	N/A	Northwest Area Management	17.5	16.8	6.4	4.6	5.8	0.0	33.6	0.0	0.0	0.0	0.0	0.0	33.6	0.0	0.0	0.0	0.0	0.0	0.0
SF-3088	11233088	N/A	AYK Management Supervision	179.3	172.1	7.0	8.3	0.5	0.0	187.9	0.0	0.0	0.0	0.0	0.0	187.9	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3098~~	~~11233098~~	~~N/A~~	~~UG/US Area Management~~	~~50.7~~	~~48.7~~	~~3.5~~	~~50.4~~	~~3.7~~	~~0.0~~	~~106.3~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~106.3~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3108	11233108	N/A	AYK Regional Administrative Services	18.1	17.4	0.0	5.5	3.0	0.0	25.9	0.0	0.0	0.0	0.0	0.0	25.9	0.0	0.0	0.0	0.0	0.0	0.0
SF-3118	11233118	N/A	F&G -AYK Region I&E	19.8	19.0	0.0	18.9	0.7	0.0	38.6	0.0	0.0	0.0	0.0	0.0	38.6	0.0	0.0	0.0	0.0	0.0	0.0
SF-3148	11233148	N/A	Kuskokwim Area Management	16.7	16.0	9.2	6.3	7.1	0.0	38.6	0.0	0.0	0.0	0.0	0.0	38.6	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3150~~	~~11233150~~		~~Fairbanks FG CAP~~	~~0.0~~	~~0.0~~	~~0.0~~	~~31.9~~	~~0.0~~	~~0.0~~	~~31.9~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~31.9~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3168	11233168		Nome FG CAP	0.0	0.0	0.0	2.9	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0
SF-3178	11233178		Bethel FG CAP	0.0	0.0	0.0	11.1	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0
SF-3188	11233188		Delta Junction FG CAP	0.0	0.0	0.0	6.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3198~~	~~11233198~~		~~Glennallen FG CAP~~	~~0.0~~	~~0.0~~	~~0.0~~	~~11.1~~	~~0.0~~	~~0.0~~	~~11.1~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~11.1~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3208	11233208	N/A	AYK Non-Qualified Research Support	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3218~~	~~11233218~~	~~N/A~~	~~Match Gulkana Chinook Tower~~	~~75.3~~	~~72.3~~	~~0.4~~	~~2.2~~	~~0.6~~	~~0.0~~	~~75.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~75.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3228	11233228	N/A	Birch Creek Northern Pike	5.8	5.6	0.0	0.0	4.7	0.0	10.3	0.0	0.0	0.0	0.0	0.0	10.3	0.0	0.0	0.0	0.0	0.0	0.0
SF-3238			AYK Workforce Training & Interns	32.4	31.1	9.7	12.0	0.3	0.0	53.1	0.0	0.0	0.0	0.0	0.0	53.1	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3858~~	~~11233858~~	~~N/A~~	~~Copper River Personal Use~~	~~72.9~~	~~70.0~~	~~0.3~~	~~9.4~~	~~3.6~~	~~0.0~~	~~83.3~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~83.3~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
~~SF-3938~~	~~11233938~~	~~N/A~~	~~Hatchery Production~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3958	11233958		F&G Unalakleet Coho	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3968~~	~~11233968~~		~~Gulkana Rainbow Trout~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
~~SF-399V~~		~~N/A~~	~~Region III Vacancy Factor~~	~~0.0~~	~~0.0~~	~~0.0~~	~~122.5~~	~~0.0~~	~~0.0~~	~~122.5~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~122.3~~	~~0.0~~	~~0.0~~	~~0.2~~	~~0.0~~	~~0.0~~	~~0.0~~
Totals for 8 - Fish and Game Fund				649.8	623.8	54.4	418.6	50.8	0.0	1,147.6	0.0	0.0	0.0	0.0	0.0	1,147.4	0.0	0.0	0.2	0.0	0.0	0.0
9 - General Fund																						

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Project #	Ledger Code	Fed Aid Job #	Project Title	71000	71000 Less 4%	72000	73000	74000	75000	Total	FED	GFM	GF	IA	EVOS	F&G	CFLN	HAZ	CIP	SPR	FGND	SFEA
~~07-0009~~		~~N/A~~	~~RIII Administrative Staff Salaries Only~~	~~263.3~~	~~252.8~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~252.8~~	~~0.0~~	~~0.0~~	~~252.8~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
Totals for 9 - General Fund				263.3	252.8	0.0	0.0	0.0	0.0	252.8	0.0	0.0	252.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for Region 3	Interior	(85	projects)	3,398.6	3,262.7	130.3	805.5	475.2	0.0	4,673.7	2,610.0	0.0	252.8	8.0	0.0	1,798.2	0.0	0.0	4.7	0.0	0.0	0.0

40 - Sport Fisheries

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Region 3 Interior

1 - F10 Sport Fish Investigations

~~SF-3021~~	~~11233021~~	~~C-3-1~~	~~AYK Research Supervision~~	~~173.6~~	~~172.9~~	~~5.6~~	~~2.9~~	~~2.7~~	~~0.0~~	~~183.6~~	~~157.2~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~45.7~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3031	11233031	R-3-6	Fairbanks Area Management (Fed)	7.5	7.2	0.0	0.0	0.0	0.0	7.2	5.4	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0
SF-3041	11233041	R-3-6	Delta Area Management (Fed)	28.7	27.6	0.0	10.3	0.0	0.0	37.9	28.4	0.0	0.0	0.0	0.0	9.5	0.0	0.0	0.0	0.0	0.0	0.0
SF-3051	11233051	R-3-6	AYK Area Management (Fed)	26.0	25.0	0.0	0.0	0.0	0.0	25.0	18.7	0.0	0.0	0.0	0.0	6.2	0.0	0.0	0.0	0.0	0.0	0.0
SF-3061	11233061	R-3-6	Northwest Area Management (Fed)	13.4	12.9	0.0	0.2	0.0	0.0	13.1	9.8	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3091~~	~~11233091~~	~~R-3-6~~	~~UCR/S Area Management (Fed)~~	~~7.1~~	~~6.8~~	~~0.0~~	~~11.1~~	~~0.0~~	~~0.0~~	~~18.9~~	~~13.7~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~4.6~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3121	11233121	S-3-1c	Chena River Chinook Habitat Evaluation	23.6	22.7	0.0	4.0	3.5	0.0	30.2	22.6	0.0	0.0	0.0	0.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3131~~	~~11233131~~	~~S-3-1d~~	~~Kuskokwim River Creel Survey~~	~~42.4~~	~~47.4~~	~~0.0~~	~~5.4~~	~~3.0~~	~~0.0~~	~~55.8~~	~~41.8~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~14.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3141	11233141	R-3-6	Kuskokwim Area Management (Fed)	0.0	0.0	0.0	0.4	0.0	0.0	0.4	0.3	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
SF-3151	11233151	C-3-1	AYK Workforce Training & Interns	28.6	27.5	15.1	3.5	3.5	0.0	49.6	37.2	0.0	0.0	0.0	0.0	12.4	0.0	0.0	0.0	0.0	0.0	0.0
SF-3161	11233161		Nome FED CAP	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.8	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
SF-3171	11233171		Bethel FED CAP	0.0	0.0	0.0	2.0	0.0	0.0	2.0	1.5	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
SF-3181	11233181		Delta Junction FED CAP	0.0	0.0	0.0	2.2	0.0	0.0	2.2	1.7	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0

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~~SF-3191~~	~~11233191~~		~~Glennallen FED CAP~~	~~0.0~~	~~0.0~~	~~0.0~~	~~5.7~~	~~0.0~~	~~0.0~~	~~5.7~~	~~4.3~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~1.4~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3201	11233201	S-3-1a	AYK Salmon Studies	49.7	47.7	0.0	11.7	8.5	0.0	67.9	50.9	0.0	0.0	0.0	0.0	17.0	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3271~~	~~11233271~~	~~S-3-1b~~	~~Copper River Salmon~~	~~84.3~~	~~81.5~~	~~5.0~~	~~36.7~~	~~31.7~~	~~0.0~~	~~148.9~~	~~111.7~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~37.2~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3301	11233301	R-3-3a	AYK Lake Trout Studies	63.3	60.8	2.0	7.9	6.9	0.0	77.6	58.2	0.0	0.0	0.0	0.0	19.4	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3321~~	~~11233321~~	~~R-3-2b~~	~~Upper Copper R Steelhead/Rainbow Trout~~	~~66.0~~	~~63.3~~	~~0.3~~	~~14.9~~	~~8.0~~	~~0.0~~	~~87.1~~	~~65.4~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~21.8~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
~~SF-3351~~	~~11233351~~		~~Fairbanks FED CAP~~	~~0.0~~	~~0.0~~	~~0.0~~	~~14.1~~	~~0.0~~	~~0.0~~	~~14.1~~	~~10.8~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~3.5~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3421	11233421	R-3-4c	AYK Northern Pike Studies	92.1	88.4	1.4	8.5	11.1	0.0	109.4	82.1	0.0	0.0	0.0	0.0	27.4	0.0	0.0	0.0	0.0	0.0	0.0
SF-3521	11233521	R-3-2c	AYK Grayling Studies	29.7	28.5	0.0	0.0	0.0	0.0	28.5	21.4	0.0	0.0	0.0	0.0	7.1	0.0	0.0	0.0	0.0	0.0	0.0
SF-3551	11233551	R-3-2e	Tanana Grayling Studies	150.0	144.0	1.5	20.3	13.3	0.0	179.1	134.3	0.0	0.0	0.0	0.0	44.8	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3681~~	~~11233681~~	~~R-3-4b~~	~~Upper Copper/Susitna Lake Burbot~~	~~42.0~~	~~40.3~~	~~1.6~~	~~1.7~~	~~3.9~~	~~0.0~~	~~47.5~~	~~35.6~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~11.9~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3701	11233701	E-3-1	Stocked Waters Evaluations	24.3	23.3	0.0	9.4	1.6	0.0	34.3	25.7	0.0	0.0	0.0	0.0	8.6	0.0	0.0	0.0	0.0	0.0	0.0
SF-3711	11233711	E-3-1	Stocked Waters Evaluation - Information	4.6	4.4	0.0	0.0	0.0	0.0	4.4	3.3	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0
SF-3721	11233721	E-3-1	Stocked Waters Evaluation - Research	185.2	177.8	1.3	12.1	10.1	0.0	201.3	151.0	0.0	0.0	0.0	0.0	50.3	0.0	0.0	0.0	0.0	0.0	0.0
SF-3731	11233731	E-3-1	Lake Characteristics & Species Inventory	57.9	55.6	0.0	6.0	1.9	0.0	63.5	47.6	0.0	0.0	0.0	0.0	15.9	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 1 - F10 Sport Fish Investigations				1,214.4	1,166.8	33.8	185.4	109.7	0.0	1,494.7	1,121.0	0.0	0.0	0.0	0.0	373.7	0.0	0.0	0.0	0.0	0.0	0.0
2 - F13 Boating Small Access Maintenance																						
SF-0632	11230632	R-3	Sm Access Boating	65.4	62.8	1.6	14.0	10.2	0.0	88.6	66.4	0.0	0.0	0.0	0.0	22.1	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 2 - F13 Boating Small Access Maintenance				65.4	62.8	1.6	14.0	10.2	0.0	88.6	66.4	0.0	0.0	0.0	0.0	22.1	0.0	0.0	0.0	0.0	0.0	0.0
3 - State Wildlife Grants																						
SF-3128	11263128		Lamprey (SWG)	4.5	4.3	0.0	0.2	4.0	0.0	8.5	6.4	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3128~~	~~11263128~~		~~Tolsona Burbot (SWG)~~	~~0.5~~	~~0.5~~	~~0.0~~	~~0.5~~	~~1.0~~	~~0.0~~	~~7.5~~	~~5.7~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~1.8~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3130	11263130		Interior Lake Assessment (SWG)	54.5	52.3	0.0	5.5	1.4	0.0	59.2	44.4	0.0	0.0	0.0	0.0	14.8	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 3 - State Wildlife Grants				65.5	62.9	0.0	6.0	6.4	0.0	75.3	56.5	0.0	0.0	0.0	0.0	18.8	0.0	0.0	0.0	0.0	0.0	0.0
4 - F31 Aquatic Education																						
SF-3084	11233084	F-31-16c	I&E Fisheries Education	78.3	75.2	5.0	0.0	1.3	0.0	81.5	61.1	0.0	0.0	0.0	0.0	20.4	0.0	0.0	0.0	0.0	0.0	0.0
SF-3114	11233114	F-31-16c	AYK Region I&E	129.5	124.3	3.7	7.1	3.5	0.0	138.6	104.0	0.0	0.0	0.0	0.0	34.7	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 4 - F31 Aquatic Education				207.8	199.5	8.7	7.1	4.8	0.0	220.1	165.1	0.0	0.0	0.0	0.0	55.0	0.0	0.0	0.0	0.0	0.0	0.0
40 - Sport Fisheries																						

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S3-SSI2	11263119		SSI Chena River Chinook	23.1	22.2	0.0	0.0	0.0	0.0	22.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.2	0.0	0.0	0.0
S3-SSSF			SSSF Copper River Northern Pike	7.1	6.8	0.0	0.0	0.0	0.0	6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	0.0	0.0	0.0
SF-3090	11263090		BLM Gulkana Tower	36.0	34.6	0.0	3.8	3.2	0.0	41.6	41.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3092	11263092		Delta RSA - Support Staff Line 100	15.1	14.5	0.0	0.6	0.0	0.0	15.1	11.3	0.0	0.0	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0
SF-3097	11263097		BLM Unalakleet Rvr Coho Abundance	0.0	0.0	0.0	5.0	35.0	0.0	40.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3102	11263102		OSM Kuskokwkim Chinook II	115.1	110.5	19.5	118.9	108.2	0.0	357.1	357.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3103	11263103		OSM Unalakleet River Coho	49.4	47.4	6.0	22.4	22.0	0.0	97.8	97.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3104	11263104		OSM Copper River Sockeye	15.8	15.3	0.0	1.8	0.0	0.0	15.1	15.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3105	11263105		OSM Kuskokwim River Sheefish	82.0	78.7	9.0	82.5	39.5	0.0	209.7	209.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3106	11263106		OSM Copper River Steelhead	12.7	12.2	0.0	0.6	0.0	0.0	12.7	12.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3115	11263115		NPS Copper River Steelhead	0.0	0.0	0.0	2.1	15.9	0.0	18.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3116	11263116		Glennallen Shared Maintenance	0.0	0.0	0.0	7.5	0.0	0.0	7.5	0.0	0.0	0.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3120	11263120		BLM Copper River Steelhead	0.0	0.0	0.0	2.4	17.8	0.0	20.2	20.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3124	11263124		OSM Ivishak Dolly Varden	7.6	7.3	0.0	16.3	2.2	0.0	25.8	25.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 40 - Sport Fisheries				362.0	347.5	34.5	263.8	243.8	0.0	889.6	849.4	0.0	0.0	7.5	0.0	3.8	0.0	0.0	29.0	0.0	0.0	0.0
5 - F13 Non-Boating Small Access Maintenance																						
SF-0635	11230635	R-3	Sm Access Non-Boating	44.1	42.3	0.8	7.3	4.3	0.0	54.7	41.1	0.0	0.0	0.0	0.0	13.7	0.0	0.0	0.0	0.0	0.0	0.0
SF-5537	11235537	R-3	Access Coordination	96.5	92.6	1.6	4.1	4.6	0.0	102.9	77.2	0.0	0.0	0.0	0.0	25.7	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 5 - F13 Non-Boating Small Access Maintenance				140.6	135.0	2.4	11.4	8.9	0.0	157.7	118.3	0.0	0.0	0.0	0.0	39.4	0.0	0.0	0.0	0.0	0.0	0.0
6 - F32 Hatchery																						
SF-3916	11233916	F-3-2	Hatchery Egg Take & Support	79.7	76.5	2.4	19.8	6.5	16.4	121.6	91.2	0.0	0.0	0.0	0.0	30.4	0.0	0.0	0.0	0.0	0.0	0.0
SF-3921		F-3-2	Region III Hatchery Vacancy Factor	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for 6 - F32 Hatchery				79.7	76.5	2.4	19.8	6.5	16.4	121.6	91.2	0.0	0.0	0.0	0.0	30.4	0.0	0.0	0.0	0.0	0.0	0.0
8 - Fish and Game Fund																						
SF-3069	11233069	N/A	R-3 Supervision	118.0	114.0	7.0	21.0	0.0	0.0	142.0	0.0	0.0	0.0	0.0	0.0	142.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3035	11233035	N/A	Fairbanks Area Management	75.2	72.2	2.8	0.5	2.4	0.0	84.0	0.0	0.0	0.0	0.0	0.0	84.0	0.0	0.0	0.0	0.0	0.0	0.0
SF-3048	11233048	N/A	Delta Area Management	105.5	101.3	1.3	26.6	1.1	0.0	130.3	0.0	0.0	0.0	0.0	0.0	130.3	0.0	0.0	0.0	0.0	0.0	0.0
SF-3058	11233058	N/A	AYK Area Management	82.3	79.0	9.3	9.8	6.0	0.0	104.1	0.0	0.0	0.0	0.0	0.0	104.1	0.0	0.0	0.0	0.0	0.0	0.0
SF-3068	11233068	N/A	Northwest Area Management	67.0	64.3	7.6	8.2	5.8	0.0	85.9	0.0	0.0	0.0	0.0	0.0	85.9	0.0	0.0	0.0	0.0	0.0	0.0

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~~SF-3093~~	~~11233093~~	~~N/A~~	~~AYK Management Supervision~~	~~199.8~~	~~186.8~~	~~7.8~~	~~0.0~~	~~0.0~~	~~0.0~~	~~193.1~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~199.1~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
~~SF-3098~~	~~11233098~~	~~N/A~~	~~UCUC Area Management~~	~~120.0~~	~~120.0~~	~~4.0~~	~~38.5~~	~~7.6~~	~~0.0~~	~~172.2~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~172.2~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3108	11233108	N/A	AYK Regional Administrative Services	17.9	17.2	0.0	7.5	3.0	0.0	27.7	0.0	0.0	0.0	0.0	0.0	27.7	0.0	0.0	0.0	0.0	0.0	0.0
SF-3118	11233118	N/A	F&G -AYK Region I&E	46.4	44.5	0.0	2.4	2.0	0.0	48.9	0.0	0.0	0.0	0.0	0.0	48.9	0.0	0.0	0.0	0.0	0.0	0.0
SF-3148	11233148	N/A	Kuskokwim Area Management	87.1	83.6	10.5	9.8	8.7	0.0	112.6	0.0	0.0	0.0	0.0	0.0	112.6	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3158~~	~~11233158~~		~~Fairbanks FG CAP~~	~~0.0~~	~~0.0~~	~~0.0~~	~~35.5~~	~~0.0~~	~~0.0~~	~~35.5~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~35.5~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3168	11233168		Nome FG CAP	0.0	0.0	0.0	1.9	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0
SF-3178	11233178		Bethel FG CAP	0.0	0.0	0.0	3.7	0.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0
SF-3188	11233188		Delta Junction FG CAP	0.0	0.0	0.0	6.3	0.0	0.0	6.3	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3198~~	~~11233198~~		~~Glennallen FG CAP~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3208	11233208	N/A	AYK Non-Qualified Research Support	125.2	120.2	3.0	2.5	3.5	0.0	129.2	0.0	0.0	0.0	0.0	0.0	129.2	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3218~~	~~11233218~~	~~N/A~~	~~Match-Gulkana Chinook Tower~~	~~76.2~~	~~67.4~~	~~6.5~~	~~7.1~~	~~6.4~~	~~0.0~~	~~81.4~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~81.4~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
~~SF-3838~~	~~11233838~~	~~N/A~~	~~Copper River Personal Use~~	~~79.2~~	~~76.0~~	~~0.3~~	~~9.2~~	~~0.0~~	~~0.0~~	~~90.5~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~90.5~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
SF-3938	11233938	N/A	Hatchery Production	63.3	60.8	2.0	62.2	23.7	0.0	148.7	0.0	0.0	0.0	0.0	0.0	148.7	0.0	0.0	0.0	0.0	0.0	0.0
SF-3958	11233958		F&G Unalakleet Coho	55.5	53.3	0.0	0.0	0.0	0.0	53.3	0.0	0.0	0.0	0.0	0.0	53.3	0.0	0.0	0.0	0.0	0.0	0.0
~~SF-3968~~	~~11233968~~		~~Gulkana Rainbow Trout~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
~~SF-3999~~	~~11234444~~	~~N/A~~	~~Region III Vacancy Factor~~	~~0.0~~	~~0.0~~	~~0.0~~	~~136.9~~	~~0.0~~	~~0.0~~	~~136.9~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~135.6~~	~~0.0~~	~~0.0~~	~~1.3~~	~~0.0~~	~~0.0~~	~~0.0~~
Totals for 8 - Fish and Game Fund				1,279.4	1,228.2	55.8	403.1	75.7	0.0	1,762.8	0.0	0.0	0.0	0.0	0.0	1,761.5	0.0	0.0	1.3	0.0	0.0	0.0
9 - General Fund																						
~~SF-3009~~			~~F&G Administrative Staff Salaries Only~~	~~263.6~~	~~253.1~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~253.1~~	~~0.0~~	~~0.0~~	~~253.1~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
Totals for 9 - General Fund				263.6	253.1	0.0	0.0	0.0	0.0	253.1	0.0	0.0	253.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals for Region 3 Interior			(74 projects)	3,678.4	3,531.3	139.2	910.6	466.0	16.4	5,063.5	2,467.8	0.0	253.1	7.5	0.0	2,304.8	0.0	0.0	30.3	0.0	0.0	0.0

9

State Funded Programs Associated with Addressing Stocks of Concern
Alaska Department of Fish and Game, Division of Commercial Fisheries, AYK Region (Region III)

AYK Regional Programs

Project No.	Title	TOTAL ALLOCATION BY SFY (x1000) 2007	2008	2009	2010	2011	2012	% Associated w/ SOC	TOTAL ASSOCIATED W/SOC BY SFY (x1000) 2007	2008	2009	2010	2011	2012	Comments
FM-30908	AYK Anchorage Admin Unit	$283.3	$314.9	$381.8	$395.9	$404.2	$412.1	45%	$127.5	$141.7	$171.8	$178.2	$181.9	$185.4	Long term base GF allocation
FM-500	Program Management, AYK Region	$445.6	$541.9	$610.9	$573.9	$1,122.4	$755.1	45%	$200.5	$243.9	$274.9	$258.3	$505.1	$339.8	Long term operating GF allocation
FM-501	Biometrics Support, AYK Region	$299.4	$337.0	$309.8	$323.9	$327.0	$354.0	45%	$134.7	$151.7	$139.4	$145.8	$147.2	$159.3	Long term operating GF allocation
FM-502	AYK Sonar Program Management	$211.8	$289.9	$235.1	$246.6	$236.4	$216.6	75%	$158.9	$217.4	$176.3	$185.0	$177.3	$162.5	Long term operating GF allocation
							AYK Regional Subtotal		**$621.6**	**$784.6**	**$762.5**	**$767.1**	**$1,011.4**	**$847.0**	

Kuskokwim River Programs

Project No.	Title	TOTAL ALLOCATION BY SFY (x1000) 2007	2008	2009	2010	2011	2012	% Associated w/ SOC	TOTAL ASSOCIATED W/SOC BY SFY (x1000) 2007	2008	2009	2010	2011	2012	Comments
FM-540	Program Management, Kuskokwim Area	$362.1	$344.8	$302.1	$310.6	$340.1	$338.4	40%	$144.8	$137.9	$120.8	$124.2	$136.0	$135.4	Long term operating GF allocation
FM-541	Fishery Monitroing Kuskokwim Area	$75.8	$84.5	$79.2	$83.2	$82.7	$89.4	50%	$37.9	$42.3	$39.6	$41.6	$41.4	$44.7	Long term operating GF allocation
FM-542	Kuskokwim River Run Assessment	$155.0	$174.5	$162.9	$155.5	$141.5	$181.9	60%	$93.0	$104.7	$97.7	$93.3	$84.9	$109.1	Long term operating GF allocation
FM-543	Escapement Surveys, KRS	$12.2	$12.2	$12.2	$12.2	$12.2	$12.2	60%	$7.3	$7.3	$7.3	$7.3	$7.3	$7.3	Long term operating GF allocation
FM-544	Kogrukluk River Weir	$68.4	$70.6	$78.0	$75.3	$79.1	$84.0	50%	$34.2	$35.3	$39.0	$37.7	$39.6	$42.0	Long term operating GF allocation
FM-545	Aniak River Sonar	$60.9	$65.5	$62.7	$74.7	$76.5	$83.0	100%	$60.9	$65.5	$62.7	$74.7	$76.5	$83.0	Long term operating GF allocation
FM-546	Kuskokwim Tagging	$155.6	$169.0	$145.4	$144.1	$141.7	$137.8	60%	$93.4	$101.4	$87.2	$86.5	$85.0	$82.7	Long term operating GF allocation
FM-547	Kuskokwim R Subsistence Monitoring	$0.0	$0.0	$37.9	$40.0	$41.4	$43.9	50%	$0.0	$0.0	$19.0	$20.0	$20.7	$22.0	Long term operating GF allocation
FM-548	Kuskokmwim Area Stock Biology	$39.7	$43.1	$40.0	$40.4	$25.2	$40.5	40%	$15.9	$17.2	$16.0	$16.2	$10.1	$16.2	Long term operating GF allocation
FM-549	Kuskokmwim Test Fish (BTF)	$48.3	$53.1	$50.2	$51.0	$52.9	$56.2	60%	$29.0	$31.9	$30.1	$30.6	$31.7	$33.7	Long term operating GF allocation
SP-480	AYK Kusko Mark Recapture	$45.0	$50.2	$45.0	$45.0	$45.0	$45.0	60%	$27.0	$30.1	$27.0	$27.0	$27.0	$27.0	F&G Fund Special Project Allocation
SP-454	Kusko Subsistence Surveys			$50.0	$67.0	$42.0	$70.0	50%	$0.0	$0.0	$25.0	$33.5	$21.0	$35.0	Recent F&G Fund Special Project Allocation (established SFY2009)
							Kuskokwim Subtotal		**$543.4**	**$573.6**	**$571.5**	**$592.5**	**$581.2**	**$638.1**	

Yukon River Programs

Project No.	Title	TOTAL ALLOCATION BY SFY (x1000) 2007	2008	2009	2010	2011	2012	% Associated w/ SOC	TOTAL ASSOCIATED W/SOC BY SFY (x1000) 2007	2008	2009	2010	2011	2012	Comments
FM-560	Summer Season Program Mgmnt	$338.5	$380.1	$390.0	$359.0	$492.0	$531.8	85%	$287.7	$323.1	$331.5	$305.2	$418.2	$452.0	Long term operating GF allocation
FM-561	Summer Season Fishery Monitoring	$162.5	$173.9	$0.0				85%	$138.1	$147.8	$0.0	$0.0	$0.0	$0.0	Long term operating GF allocation
FM-562	Fall Season Program Mgmnt	$466.0	$514.5	$510.3	$520.9	$513.1	$541.8	65%	$302.9	$334.4	$331.7	$338.6	$333.5	$352.2	Long term operating GF allocation
FM-563	Fall Season Fishery Monitoring	$106.1	$116.4	$112.3	$107.0	$98.1	$101.9	65%	$69.0	$75.7	$73.0	$69.6	$63.8	$66.2	Long term operating GF allocation
FM-564	Pilot Station Sonar	$0.0	$0.0	$359.3	$398.8	$0.0	$338.4	90%	$0.0	$0.0	$323.4	$358.9	$0.0	$304.6	Recent operating GF Allocation (Shifted from federal to state in SFY2009)
FM-565	Sheenjek Sonar	$0.0	$0.0	$102.6	$105.5	$110.0	$112.2	100%	$0.0	$0.0	$102.6	$105.5	$110.0	$112.2	Recent operating GF Allocation (Shifted from federal to state in SFY2009)
FM-566	Lower Yukon Summer Chum TF				$18.9	$19.3	$19.4	50%	$0.0	$0.0	$0.0	$9.5	$9.7	$9.7	Long term operating GF allocation
FM-567	Hooper Bay/Dall Point Offshore TF				$67.0	$66.8	$71.0	100%	$0.0	$0.0	$0.0	$67.0	$66.8	$71.0	Recent operating GF Allocation (Established in SFY2010)
FM-568	Lower YR TF / Stock Assessment	$0.0	$0.0	$88.7	$90.5	$91.0	$98.6	100%	$0.0	$0.0	$88.7	$90.5	$91.0	$98.6	Recent operating GF Allocation (Shifted from federal to state in SFY2009)
FM-569	Upper Yukon River Salmon	$15.0	$15.0	$15.0	$35.0	$35.0	$35.0	95%	$14.3	$14.3	$14.3	$33.3	$33.3	$33.3	Long term operating GF allocation
FM-571	Yukon River Escapement Surveys	$0.0	$0.0	$47.2	$46.0	$41.7	$42.6	90%	$0.0	$0.0	$42.5	$41.4	$37.5	$38.3	Recent operating GF Allocation (Shifted from federal to state in SFY2009)
FM-572	Yukon River Subsistence Estimation			$160.2	$194.1	$188.7	$197.9	90%	$0.0	$0.0	$144.2	$174.7	$169.8	$178.1	Recent operating GF Allocation (Shifted from federal to state in SFY2009)
FM-573	Yukon River JTC Support			$105.7	$99.6	$0.0	$101.3	100%	$0.0	$0.0	$105.7	$99.6	$0.0	$101.3	Recent operating GF Allocation (Shifted from federal to state in SFY2009)
FM-574	Yukon River TF Fall Season				$59.1	$56.8	$61.1	50%	$0.0	$0.0	$0.0	$29.6	$28.4	$30.6	Long term operating GF allocation
FM-575	Yukon River Eagle Sonar						$119.7	100%	$0.0	$0.0	$0.0	$0.0	$0.0	$119.7	Recent GF Allocation (Shifted from R&E to state in SFY2012)

CP-744	Yukon River Pilot Station Sonar Est.		$500.0				100%	$0.0	$0.0	$500.0	$0.0	$0.0	$0.0 5-year CIP Program (established SFY2009)
CP-720	Pilot Station Sonar Assessment					$250.0	90%	$0.0	$0.0	$0.0	$0.0	$0.0	$225.0 5-year CIP Program (established SFY2012)
							Yukon Subtotal	**$812.0**	**$895.2**	**$2,057.6**	**$1,723.1**	**$1,361.9**	**$2,192.7**

Norton Sound Programs

		TOTAL ALLOCATION BY SFY (x1000)						% Associated	TOTAL ASSOCIATED W/SOC BY SFY (x1000)						
Project No.	Title	2007	2008	2009	2010	2011	2012	w/ SOC	2007	2008	2009	2010	2011	2012	Comments
FM-577	Southern NS Sonar Equipment						$150.0	30%	$0.0	$0.0	$0.0	$0.0	$0.0	$45.0	Recent one-time GF Allocation (established SFY2012)
FM-578	Southern NS Salmon Assessment						$160.0	35%	$0.0	$0.0	$0.0	$0.0	$0.0	$56.0	Recent operating GF Allocation (established SFY2012)
FM-579	Norton Sound Chinook Genetics						$75.5	100%	$0.0	$0.0	$0.0	$0.0	$0.0	$75.5	Recent operating GF Allocation (established SFY2011)
FM-580	Program Management, NS Salmon	$463.6	$499.7	$465.2	$460.2	$504.4	$524.5	30%	$139.1	$149.9	$139.6	$138.1	$151.3	$157.4	Long term operating GF allocation
FM-581	Norton Sound Fishery Monitoring	$22.8	$24.7	$23.5	$38.4	$40.1	$42.6	50%	$11.4	$12.4	$11.8	$19.2	$20.1	$21.3	Long term operating GF allocation
FM-582	Unalakleet Fishery Monitoring	$54.3	$59.3	$80.2	$73.8	$75.6	$83.1	30%	$16.3	$17.8	$24.1	$22.1	$22.7	$24.9	Long term operating GF allocation
FM-583	NS Salmon Escapement Surveys	$15.6	$15.6	$15.6	$22.0	$22.0	$22.0	40%	$6.2	$6.2	$6.2	$8.8	$8.8	$8.8	Long term operating GF allocation
FM-585	Kwiniuk River Tower	$40.2	$57.1	$54.7	$58.3	$59.5	$63.4	60%	$24.1	$34.3	$32.8	$35.0	$35.7	$38.0	Long term operating GF allocation
FM-586	Norton Sound Stock Biology	$77.1	$86.1	$80.6	$85.2	$87.4	$92.0	45%	$34.7	$38.7	$36.3	$38.3	$39.3	$41.4	Long term operating GF allocation
FM-589	Nome River Weir	$32.6	$35.5	$34.7	$36.4	$37.9	$38.2	30%	$9.8	$10.7	$10.4	$10.9	$11.4	$11.5	Long term operating GF allocation
FM-591	Niukluk River Tower	$44.3	$49.5	$47.6	$49.0	$50.6	$53.6	25%	$11.1	$12.4	$11.9	$12.3	$12.7	$13.4	Long term operating GF allocation
SP-472	NS Salmon and Herring	$29.9	$37.9	$29.9	$29.9	$10.0	$45.0	30%	$9.0	$11.4	$9.0	$9.0	$3.0	$13.5	F&G Fund Special Project Allocation
							Norton Sound Subtotal		**$261.7**	**$293.7**	**$282.0**	**$293.7**	**$304.9**	**$506.7**

AYK Grand Total **$2,238.6** **$2,617.2** **$3,673.4** **$3,376.5** **$3,259.5** **$4,184.5**

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Alaska Sustainable Salmon Fund Projects

(Exclusive of AYK SSI Earmark Projects)

FFY 2000-2010

Current to September, 2011

Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45203	Chinook Parasite Effects	2002	Study the effects of *Ichthyophonus* on survival and reproductive success of Chinook salmon in the AYK area.	ADF&G, Commercial Fisheries Division	7/1/02	6/30/07	$500,000	AYK (Upper Kuskokwim River)
45364	YRDFA: Rapids Research Center Technical Training & Assistance	2003	This project will provide technical and training assistance at the RRC in the Upper Yukon management area for the development of training materials and the training of students at the RRC, in part, to collect ASLWG data and tissue samples for the detection of Ichthyophonus disease in Chinook and chum salmon.	Yukon River Drainage Fisheries Association	5/29/08	6/30/08	$5,961	AYK (Upper Yukon River)
45402	YRDFA: Planning Project	2003	Identify projects to sustain and/or restore salmon stocks and salmon fisheries in the Yukon River area. Planning efforts will be coordinated with other entities involved with salmon resource and social issues in the Yukon River drainage.	Yukon River Drainage Fisheries Association	9/1/03	6/30/04	$50,353	AYK (Yukon River)
45403	YRDFA: Grayling In-Season Subsistence	2003	Document the subsistence salmon harvest for the community of Grayling. Gather harvest timing and post-season survey information. Managers will be able to access important harvest information in-season to facilitate management decisions and ensure that all Yukon River users meet their goals.	Yukon River Drainage Fisheries Association	6/1/04	6/30/05	$16,109	AYK (Lower Yukon River)
45404	YRDFA: Fort Yukon Subsistence Monitoring	2003	Learn about and monitor the harvest, timing and fishing locations of the subsistence fishery in the Ft. Yukon area. Collect related harvest information. Determine locations of fall chum harvests relative to the confluence of the Porcupine River within the Yukon.	Yukon River Drainage Fisheries Association	6/1/04	6/30/06	$39,114	AYK (Upper Yukon River)
45405	YRDFA: Local Fisheries Technicians	2003	Fund local Fisheries Technicians (FT) to work with ADF&G. Provide local Yukon River resident involvement at various test fishery locations within the Yukon River Drainage. In addition to this, the YRDFA staff biologist will travel to each test fishery site location to meet with the local FT to learn about the project to gain YRDFA institutional knowledge of the various test fisheries on the Yukon River.	Yukon River Drainage Fisheries Association	6/1/04	6/30/07	$203,844	AYK (Upper Yukon River)
45406	YRDFA: Depth and Temperature Data of Tagged Chinook	2003	Local fishers will capture Chinook salmon near the village of Russian Mission. Project personnel will tag selected fish with radio-archival tags that record swimming depth and water temperature. Remote tracking stations will track the fish, and aircraft will be used to locate and recover the tags to download the archival data.	Yukon River Drainage Fisheries Association	6/1/04	6/30/05	$26,143	AYK (Lower Yukon River)
45407	YRDFA: Henshaw Creek Resistance Board Weir	2003	Enumerate the daily and seasonal escapement of adult Chinook and summer chum in Henshaw Creek, describe their run timing, describe their age, sex, and length compositions, serve as a training platform for YRDFA's fisheries technicians, and enumerate resident fish (northern pike, longnose suckers, and whitefish) passing the weir.	Yukon River Drainage Fisheries Association	6/1/04	6/30/05	$23,070	AYK (Upper Yukon River)
45408	YRDFA: Gear Survey Yukon River Chinook	2003	Survey fishers along the river to determine gillnet mesh sizes, depth of nets, numbers and location of fish wheels, and the time they are used. Visit fishing camps and buying stations to verify mesh sizes of commercial and subsistence gear. As the Chinook run progresses upriver, the sampling crew would follow the migration.	Yukon River Drainage Fisheries Association	6/1/04	6/30/06	$25,319	AYK (Yukon River)
45409	YRDFA: Andreafsky River Resistance Board Weir	2003	Data describing the coho salmon run in the East Fork, Andreafsky River will provide state and federal managers with information to regulate the harvest and to provide for sufficient escapement. This stock is a surrogate for modeling other coho stocks in the lower Yukon.	Yukon River Drainage Fisheries Association	6/1/04	6/30/05	$10,083	AYK (Lower Yukon River)
45410	YRDFA: Subsistence Assistance Post Season	2003	Hire 15 to 33 individuals that will assist with local logistics, conduct follow-up surveys, and help bridge any cross-cultural gaps between surveyors and residents as the subsistence surveys progress from village to village.	Yukon River Drainage Fisheries Association	6/1/04	6/30/07	$28,344	AYK (Yukon River)
45411	YRDFA: *Ichthyophonus* Planning Yukon and Bering Sea	2003	Bring together various investigators and stakeholders to assess what we know about *Ichthyophonus*, based on the concept that many people have answers to the parts of this puzzle but no one has answers to all the parts. Identify the important information gaps, and create a research plan to investigate the priority elements identified.	Yukon River Drainage Fisheries Association	6/1/04	6/30/05	$16,952	AYK (Yukon River)
45412	YRDFA: Gear Selection Subsistence Chinook	2003	The Federal Subsistence Board adopted regulations allowing drift gillnetting in federal waters in Yukon River Districts 4-B and 4-C. The potential biological impacts and shifts in stock composition of the harvests caused by this change are unknown and a cause for concern. Tissue samples will be collected from individual Chinook salmon representatively sampled from several subsistence fisheries. Composite genotypes will be assayed for individuals in each collection, and stock composition estimates will be provided.	ADF&G, Commercial Fisheries Division	6/1/05	9/30/06	$37,483	AYK (Yukon River)
45413	YRDFA: Fish Wheel Training	2003	The candidate for new fishwheel operator needs to be trained in operation skills of both the fishwheel and the video monitoring equipment. This project will enable training to occur by the previous operator of the fishwheel and compensate him for his time.	Yukon River Drainage Fisheries Association	5/24/05	6/30/06	$2,258	AYK (Yukon River)

Alaska Sustainable Salmon Fund Projects

(Exclusive of AYK SSI Earmark Projects)

FFY 2000-2010

Current to September, 2011

Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45414	YRDFA: Quality Training for Yukon Fishermen - Part 1	2003	Through trainings and informational sessions, commercial fishermen on the Yukon River will be provided with information means and methods to increase the quality of their catch. Meetings will also take place with the processors to learn more about their practices in order to create a working partnership towards progress at the different levels of fish handling.	Yukon River Drainage Fisheries Association	6/1/05	6/30/07	$9,891	AYK (Yukon River)
45419	Sport Fish Hatchery Development	2003	Determine the effect of groundwater iron and manganese on cultured fish and select an appropriate removal method for operating a large hatchery. Engage a qualified engineering firm to conduct a full study of the Sport Fish hatchery program, including a possible new Fairbanks hatchery, and develop design options.	ADF&G, Sport Fish Division	7/1/03	6/30/05	$492,920	AYK (Upper Yukon River)
45501	Fairbanks Hatchery Study and Design - Phase I	2004	Complete a functional design for a hatchery to be constructed within the City of Fairbanks. The design of existing facilities, combined with limitations of water, heat, age, and a deteriorating infrastructure, have recently made it impossible to satisfy current and projected production needs.	ADF&G, Sport Fish Division	7/1/04	3/31/09	$3,326,480	AYK (Upper Yukon River)
45538	YRDFA: Administration and Management	2004	Manage PCSRF-funded projects in an efficient manner. Provide staff support to develop, implement, and manage the suite of projects that the YRDFA Board of Directors has selected. Conduct the request for proposal and project selection and tracking processes, respond to requests from proponents, and offer technical review and recommendations.	Yukon River Drainage Fisheries Association	5/24/05	6/30/06	$180,062	AYK (Yukon River)
45539	YRDFA: Kaltag Fishery Development	2004	Construct a temporary primary salmon processing facility. Provide fishermen with a market for their salmon harvests in 2005 and generate information necessary to conduct a feasibility analysis of utilizing an unfinished fish processing building in Kaltag, AK.	Yukon River Drainage Fisheries Association	5/24/05	6/30/06	$70,944	AYK (Yukon River)
45540	YRDFA: Lower Yukon River Marketing Program	2004	Provide two processors on the Lower Yukon River with funding to upgrade their marketing materials, visit customers, carry out promotional activities, and attend trade shows. Packaging materials will be purchased for shipping and frozen samples will be kept for out-of-season promotional opportunities. Branding will also take place through logo, fish tag, and label development.	Yukon River Drainage Fisheries Association	5/24/05	6/30/06	$22,889	AYK (Lower Yukon River)
45541	YRDFA: Marketing Yukon River Caviar	2004	Prepare informational literature and posters that promote Wild Yukon River salmon caviar for high value niche market development. Analyze a sample amount of already-processed roe for the suitability to repackage as salmon caviar. Distribute sample packages to potential customers. Develop an internet site and offer contact information and cross links for direct sales of Wild Yukon River salmon caviar.	Yukon River Drainage Fisheries Association	5/24/05	6/30/06	$53,970	AYK (Yukon River)
45542	YRDFA: Local Technician for Tozitna River Weir	2004	Monitoring salmon escapement in the Tozitna River aids Federal and State fisheries managers in evaluating and adjusting harvest strategies. The Yukon River Regional Advisory Councils have called for studies to address salmon declines, including projects that assess the production of salmon from tributary streams and quantify their contribution to the overall productivity of the Yukon River drainage.	Yukon River Drainage Fisheries Association	5/24/05	6/30/06	$10,188	AYK (Yukon River)
45543	YRDFA: Yukon River Regional Marketing Program	2004	Develop new markets for Yukon River salmon and build brand recognition through marketing efforts that will promote the Yukon River salmon name. Written marketing materials will be developed and made available to every salmon producer on the Yukon River. Information packets will be distributed to grocers, restaurants, and distributors nationwide. Individual producers will have all materials available for their own direct marketing efforts.	Yukon River Drainage Fisheries Association	5/24/05	6/30/06	$74,686	AYK (Yukon River)
45544	YRDFA: Andreafsky Abundance and Run Timing	2004	Since 1994, a floating weir has operated on the East Fork Andreafsky River from mid-June to late September to provide escapement and biological data. Daily escapement data will be provided to managers to assess lower Yukon River coho salmon run strength. Fish will be counted 24 hours per day to allow salmon to migrate upstream with less stress.	Yukon River Drainage Fisheries Association	5/24/05	6/30/06	$22,117	AYK (Lower Yukon River)
45545	YRDFA: Fort Yukon Sheenjek Genetics Sampling Project	2004	Collect samples for genetic stock identification baseline data from Chinook salmon in the Sheenjek River, a tributary of the Porcupine River which begins at the community of Fort Yukon in the Yukon Flats of the Upper Yukon River. Location and sampling times will be adjusted to maximize the possibility of reaching the sampling goals.	Yukon River Drainage Fisheries Association	5/24/05	6/30/07	$21,162	AYK (Upper Yukon River)
45546	YRDFA: Fisheries in the Classroom	2004	Three rural schools will be selected to participate in the 4-H Natural Resource and Youth Development Program. Participating schools will receive financial support from YRDFA to purchase classroom incubator equipment, to attend in-service training, and receive support from Cooperative Extension Service and YRDFA staff.	Yukon River Drainage Fisheries Association	5/24/05	6/30/07	$25,198	AYK (Yukon River)

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45547	YRDFA: Annual Yukon River Symposium Travel	2004	The YRDFA Annual Symposium will be held in Hooper Bay March 2-5, 2009. This project provides symposium travel funding for a limited number of YRDFA board members and regional representatives. The YRDFA symposium is the only river-wide forum that brings salmon fishers together from the entire length of the river to discuss important fisheries issues facing salmon resource management. In addition, the State of Alaska Department of Fish and Game and the U.S. Fish and Wildlife Service managers attend the symposium and work with local people on the best management approaches for both people and salmon. Attendees learn and share timely fisheries-related information, and are encouraged to communicate what they have learned to others in their home communities. A symposium summary will be written and posted on the YRDFA website: www.yukonsalmon.org.	Yukon River Drainage Fisheries Association	2/1/09	3/31/09	$11,048	AYK (Yukon River)
45549	YRDFA: Local Fisheries Technicians - Part 1	2004	Fund local Fisheries Technicians to work with ADF&G. Provide local Yukon River resident involvement at various test fishery locations within the Yukon River Drainage.	Yukon River Drainage Fisheries Association	7/1/05	6/30/06	$4,277	AYK (Yukon River)
45552	YRDFA: Natural Indicators of Salmon Run Abundance/Timing - Part II	2004	This project was undertaken to understand historical abundance, distribution, and health of salmon populations in several subsistence communities in the Yukon River drainage through the documentation and incorporation of local traditional knowledge (LTK) pertaining to natural indicators of salmon population dynamics.	Yukon River Drainage Fisheries Association	7/1/08	4/30/09	$57,235	AYK (Lower Yukon River)
45606	YRDFA: Department of Environmental Conservation-Approved Fish Camp Roe Processing Facilities	2005	This project will provide materials and plans to build Department of Environmental Conservation-compliant facilities to roe fishers on the Yukon River. These facilities will allow Yukon River fishers to continue to sell roe legally. The roe fishery provides a vital source of income to many fishers on the middle Yukon River. Without these facilities the roe fishery will not operate; financial and technical assistance is necessary to make these facilities available to Yukon River fishers.	Yukon River Drainage Fisheries Association	5/1/06	4/30/07	$21,478	AYK (Yukon River)
45625	Fairbanks Sport Fish Hatchery Project - Phase II	2005	The construction of a new Fairbanks hatchery, to take over production for Region III stocking projects, has been proposed as part of the overall planning for the future of the Sport Fish hatchery system. The requirement for this facility is to meet angler demand in the Region III area for the next 20 years. The new facility will be built to increase the size and the numbers of fish now allocated for the interior area. The anticipated tasks for the FY 2005 funding will target the design contract and contract management for the project.	ADF&G, Sport Fish Division	3/1/06	3/31/10	$3,300,145	AYK (Upper Yukon River)
45651	YRDFA: Administration Management Procedures, Policy Monitoring, and Outreach and Communication	2005	YRDFA will work to manage projects supported by AKSSF in an efficient manner. This includes both the financial and managerial administration of program oversight.	Yukon River Drainage Fisheries Association	7/1/06	8/30/07	$174,733	AYK (Yukon River)
45652	YRDFA: Regional Marketing Program - Part II	2005	Continue to develop new markets for Yukon River Salmon and to build brand recognition through marketing efforts that will promote the Yukon River salmon name.	Yukon River Drainage Fisheries Association	5/17/06	7/31/07	$69,483	AYK (Yukon River)
45653	YRDFA: Kaltag Fisheries Development Project - Part 2	2005	Assist the community of Kaltag to seek additional funds for completion of the fish plant through the Federal Emergency Disaster Assistance. In addition, provide technical assistance with soliciting tenants to lease the plant and any additional assistance related to fisheries business management.	Yukon River Drainage Fisheries Association	6/1/06	9/1/07	$17,167	AYK (Yukon River)
45654	YRDFA: Local Fisheries Technicians - Part 2	2005	Fund local Fisheries Technicians to work with ADF&G. Provide local Yukon River resident involvement at various test fishery locations within the Yukon River Drainage.	Yukon River Drainage Fisheries Association	7/1/06	6/30/08	$95,086	AYK (Yukon River)
45655	YRDFA: Sub-Regional Yukon River Marketing Program	2005	Support a local processor as it develops a marketing program comprised of magazine ads, website promotions, and mail-order catalogs targeted at different demographic groups.	Yukon River Drainage Fisheries Association	7/1/06	6/30/07	$11,444	AYK (Upper Yukon River)
45656	YRDFA: Quality Training for Yukon Fishermen - Part 2	2005	Through trainings and informational sessions, commercial fishermen on the Yukon River will be provided with information means and methods to increase the quality of their catch. Meetings will also take place with the processors to learn more about their practices in order to create a working partnership towards progress at the different levels of fish handling.	Yukon River Drainage Fisheries Association	6/1/05	6/30/07	$4,495	AYK (Yukon River)

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45657	YRDFA: Yukon River District Y-2 Fisheries Development	2005	This project is an economic development opportunity project to assist with the establishment of a commercial chum salmon fishery on the lower Yukon River and strengthen the long-term economic viability of Yukon River salmon fishing communities. The objective of this project is to revitalize a commercial chum fishery in Yukon River District Y-2, a goal important to both ADF&G and to the YRDFA's Board of Directors.	Yukon River Drainage Fisheries Association	4/1/07	1/31/08	$20,600	AYK (Lower Yukon River)
45659	YRDFA: Fisheries Outreach & Advocacy	2005	The Yukon River Drainage Fisheries Association (YRDFA) will facilitate fishermen's involvement in management decisions, participate in decision-making forums, and cultivate coalitions between Yukon River groups and organizations. Staff will design and plan cooperative efforts to address fisheries management issues on the Yukon River, promoting healthy wild salmon fisheries in management forums.	Yukon River Drainage Fisheries Association	11/1/09	3/31/10	$73,242	AYK (Yukon River)
45129	YRDFA: Adminstration and Management FY08	2006	YRDFA will work to develop new projects, manage current projects, and evaluate previous projects supported by the AKSSF. This includes both the development of new goals and objectives and the financial and managerial program oversight, and the representation of Yukon River fishers at numerous state, federal, and international forums, councils and agencies which make decisions impacting the Yukon River, the salmon, and the fishers.	Yukon River Drainage Fisheries Association	10/12/07	10/31/09	$241,268	AYK (Yukon River)
45130	YRDFA: Salmon Research, Monitoring, and Evaluation FY08	2006	Through this project the YRDFA Fishery Biologist will participate in regulatory meetings to provide an independent scientific view for Yukon River fishers on fisheries research and management decisions; provide scientific analysis on a broad range of marine, in-river management, and habitat issues and proposals to inform YRDFA's policy advocacy; and determine YRDFA's scientific direction.	Yukon River Drainage Fisheries Association	10/17/07	06/30/09	$61,533	AYK (Yukon River)
45731	Sex Marker for Yukon River Salmon	2006	This project will develop an important research tool for Yukon River Chinook salmon management. Yukon River Chinook salmon populations are currently declining, possibly as a result of skewed sex ratios. Critical measures of reproductive success and productivity are needed to understand this situation. This project will develop a sex-linked genetic marker for escapement studies of Chinook salmon from the Yukon River.	University of Idaho Department of Biological Sciences and Center for Reproductive Biology	5/1/10	5/1/11	$88,822	AYK (Yukon River)
45732	Natural Indicators Salmon Run – Ph. 3 of 4	2006	This project will use a multidisciplinary team to examine environmental variables affecting salmon run timing and abundance in the Yukon River. The research team, including scientists and Alaska Natives from local communities, will develop a list of measurable natural indicators, compile data relevant to those variables, develop a study plan for analysis, and create a template for annual observations. The project will provide a framework for future analysis of natural indicators. *This project continues work begun in AKSSF projects 45485 and 45552.*	Yukon River Drainage Fisheries Association	5/1/10	3/31/11	$50,328	AYK
45733	Nome River Coho Salmon Smolt – Phase 4 of 4	2006	This project will examine the potential for habitat-based escapement goals for coho salmon within the Norton Sound region, providing a sixth consecutive coho salmon smolt production estimate, and a fourth estimate of marine survival for smolts from the Nome River. Results of this study will be directly relevant to examinations of habitat-based escapement models, stock management, and marine vs. freshwater influences on survival of a highly utilized salmon stock in the AYK region. *This project continues work begun in AKSSF projects 45495, 45581, and 45058.*	Norton Sound Economic Development Corporation (NSEDC)	5/1/10	3/31/11	$111,906	AYK (Norton Sound)
45735	Chena River Chinook Escapement	2006	This project will estimate Chinook and chum salmon escapement on the Chena River using a combination of tower and dual-frequency identification sonar (DIDSON) counts. This project will also estimate the age, sex, and length composition of the Chinook escapement from spawned-out carcasses. Accurate escapement estimates are necessary to manage the stock and ensure a continued subsistence fishery.	ADF&G, Sport Fish Division	6/6/10	3/31/11	$84,405	AYK (Upper Yukon River)
45744	Nenana Salmon Tissue Collections	2006	This project will collect tissues samples for genetic analysis from spawning salmon populations in the Nenana River Drainage. The main focus will be on Chinook salmon at several known spawning locations and at least one fall chum population, filling a data gap in the Yukon Chinook and chum salmon genetic baseline collections.	Bering Sea Fishermen's Association (BSFA)	6/9/10	3/31/11	$22,063	AYK (Yukon River)
45752	Homogeneity of Chinook in Trawls	2006	This project will determine the genetic uniqueness of Chinook salmon taken in individual groundfish hauls and areas in the Bering Sea north of Unimak Pass during the spring 2009 salmon excluder device test. The main goal of this project is to determine whether salmon taken in a particular haul or location are from the same stock or have mixed with other stocks. This project will genotype the samples; the statistical analysis will be funded separately.	Alaska Fisheries Science Center (AFSC), NOAA fisheries, Auke Bay Laboratories (ABL), Ted Stevens Marine Research Institute (TSMRI)	7/15/10	3/31/11	$63,860	AYK

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45753	Yukon River Chum Salmon Baseline	2006	This project will augment the Yukon River chum salmon baseline by genetically assaying over 4,000 samples at 13 microsatellite loci, nearly doubling the baseline size and adding seven new stocks. A larger baseline will provide more accurate stock composition estimates for managing Yukon River chum salmon.	U.S. Fish and Wildlife Service Conservation Genetics Laboratory	7/1/10	3/31/11	$125,660	AYK
45758	Pre-processing Chum DNA	2006	This project will pre-process DNA from archived tissue samples prior to analysis in order to ensure the best quality information for the chum salmon baseline developed for the Western Alaska Salmon Stock Identification Project (WASSIP). Two recently developed technologies (alcohol precipitation and preamplification) will be used to improve the resolution available from older archived tissue samples where DNA has degraded. These steps are critical for achieving a high level of precision and accuracy. The resulting data will be used to provide insight on the effects of harvest activities in freshwater and nearshore commercial and subsistence chum fisheries.	ADF&G, Commercial Fisheries Division	4/22/11	6/30/11	$58,290	AYK
45131 (700)	YRDFA: Fisheries Management Participation	2006	The Yukon River Drainage Fisheries Association (YRDFA) will facilitate fishermen's involvement in management decisions, participate in decision-making forums, and cultivate coalitions between Yukon River groups and organizations. Staff will design and plan cooperative efforts to address fisheries management issues on the Yukon River, promoting healthy wild salmon fisheries in management forums. YRDFA will work collaboratively with state, federal, and international agencies and boards, as well as non-governmental organizations, tribes, communities, and conservation groups, in support of this project. *This project continues work begun in AKSSF project 45659.*	Yukon River Drainage Fisheries Association	7/1/10	3/31/11	$173,872	AYK (Yukon River)
45848	Non-Natal Stream Use by Juvenile Chinook	2007	This project will identify important rearing areas for juvenile Chinook salmon in the U.S. portion of the upper Yukon River drainage. It will prioritize stream sampling, inventory at least 60 Yukon River tributary streams for the presence of juvenile Chinook; describe rearing habitat characteristics for the Chinook found in sampled streams; nominate streams for inclusion in the State of Alaska's AWC; describe timing and duration of non-natal Chinook immigrants; and will involve local student and community members in the collection, analysis and dissemination of project results.	US Fish and Wildlife Service (USFWS)	4/17/08	5/30/11	$101,738	AYK (Upper Yukon River)
45852	Tanana River Tributary Fish Inventory	2007	This project will identify the presence of salmon species and catalog anadromous waterbodies in the Tanana River drainage tributaries between Nenana and Delta Junction, Alaska during the open water season. The purpose of the project is to identify the location of critical spawning, rearing, and migration habitat along with site-specific aquatic habitat characteristics such as substrate, water chemistry, and hydrology. This project will add to and augment the AWC by determining the presence of anadromous fish species in the tributaries to the Tanana River.	US Fish and Wildlife Service (USFWS)	5/15/08	6/30/10	$187,592	AYK (Upper Yukon River)
45871	Climate Effects on Chinook	2007	Understanding the impact of environmental conditions and variability in biotic and abiotic factors on estimates of abundance and survival of Kuskokwim River Chinook salmon is important for forecasting abundance. Study objectives are to: 1) describe potential environment-recruit relationships by incorporating environmental variables into a spawner-recruit model; and 2) identify deficiencies in environmental and life-history information needed for improvement of this model.	University of Alaska Fairbanks (UAF)	7/1/08	5/31/11	$154,728	AYK (Kuskokwim River)
45874	Anadromous Cataloging - Year 1	2007	In August 2008, a rapid, systematic inventory of salmon distribution and associated aquatic and riparian habitat characteristics in streams and rivers of the Yukon River drainage between Kaltag and Marshall will be conducted. At each reach sampled, a suite of aquatic and riparian habitat characteristics will be documented. These observations will be recorded in the Alaska Freshwater Fish Inventory database (AFFID), and made publicly available via the AFFID internet mapping service. Each water body in which salmon or other anadromous fish are observed will receive a nomination to the Catalog of Waters Important for the Spawning, Rearing or Migration of Anadromous Fishes (AWC).	ADF&G, Sport Fish Division	7/1/08	6/30/09	$85,315	AYK (Yukon River)
45879	Fairbanks Restoration Workshop	2007	This project funds a two-day Restoration Workshop for Fairbanks North Star Borough ADF&G staff, state and federal agencies, municipalities, watershed groups, non-profit organizations, conservation groups, contractors, and private consultants. The Workshop will provide essential fish life history and habitat educational information, a fish habitat restoration curriculum, and bio-technical restoration technique information, supplementing the educational outreach necessary for the successful conduct of future restoration efforts in or near Fairbanks. The Workshop will also restore approximately 50 feet of damaged riverbank.	ADF&G, Sport Fish Division	5/1/09	6/30/09	$9,718	AYK (Upper Yukon River)

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45887	Fairbanks Cost Share Program	2007	The Fairbanks Cost Share Project is a proactive financial incentive and educational outreach program that provides funding and technical project design assistance for public and private landowners to sustain and enhance valuable salmon habitat in the Fairbanks area. ADF&G will partner with USFWS and conduct a restoration program to rehabilitate and sustain fish habitat in Central Alaska watersheds over a two year period.	ADF&G, Sport Fish Division	7/1/09	12/31/11	$172,857	AYK (Upper Yukon River)
45889	Anadromous Cataloging in W. AK – Year 2	2007	In August 2009, this project will conduct a rapid, systematic inventory of anadromous fish distribution and associated aquatic and riparian habitat characteristics in selected middle Kuskokwim and Unalakleet River drainages. Each of three crews will sample standardized target stream reaches using electrofishers with sufficient effort to collect all species (perhaps with the exception of rare species) of the extant fish community. At each reach sampled, standard aquatic and riparian habitat characteristics will also be documented. These observations will be recorded in the AFFI database (AFFID), and made publicly available via the AFFID internet mapping service. For each water body in which anadromous fish are observed, a nomination to The Catalog of Waters Important for the Spawning, Rearing or Migration of Anadromous Fishes (AWC) will be submitted. *This project continues work begun in AKSSF project #45874.*	ADF&G, Sport Fish Division	7/1/09	6/30/10	$95,560	AYK
45911	Genetic Analysis of Chinook Bycatch	2008	This project will identify the limits of the current bycatch sample collections, stratify the samples through a subsampling plan, and then determine stock assessments for the Chinook bycatch within the identified strata. This will be accomplished by genotyping available Chinook salmon genetic samples collected by the Observer Program for 2008 and then grouping those samples in a manner that will minimize bias and variation in composition estimates.	National Oceanic and Atmospheric Administration	7/1/09	6/30/10	$62,418	AYK (Bering Sea)
45920	Kuskokwim River Sockeye Salmon	2008	This project will develop estimates of the number of sockeye salmon that returned to the Kuskokwim River annually from 1985 - 2012 by developing a statistical model that combines data collected from mark-recapture investigations with the historical escapement index.	ADF&G, Commercial Fisheries Division	6/16/09	3/31/13	$368,363	AYK (Lower Kuskokwim River)
44508	Kuskokwim Chum Tagging Effects	2009	This project will compare two handling technique treatments for tagging chum salmon on the Kuskokwim River to determine if one treatment displays faster recovery from tagging and better survival than the other. Identification of an improved method could be utilized in full scale mark–recapture studies to estimate chum salmon abundance. The need for accurate abundance estimates is integral to management of subsistence fisheries on the Kuskokwim River.	ADF&G, Commercial Fisheries Division	5/15/10	5/15/11	$26,158	AYK (Kuskokwim River)
44510	Chinook Growth: Retro Analysis	2009	This project will use archived scale samples to develop a time series of freshwater growth in Yukon and Kuskokwim River Chinook salmon *(Oncorhynchus tshawytscha)* that will be used to assess the effects of freshwater growth on survival to the age of reproduction. Additionally, juvenile Chinook will be reared and monitored in a laboratory to validate the relationships between scale and otolith characteristics and juvenile growth trends and body size. The results will complement a parallel field study of effects of *Ichthyophonous* to provide insight into the importance of freshwater growth in determining inter-annual fluctuations in the returns of Arctic-Yukon-Kuskokwim (AYK) Chinook salmon stocks.	University of Alaska Fairbanks (UAF) School of Fisheries and Ocean Sciences	7/1/10	6/30/12	$181,060	AYK
44511	Yukon Fall Chum Growth & Climate	2009	Growth of salmon in marine and freshwater habitats is a key factor affecting salmon survival and characteristics such as age-at-maturation. Climate change may have significant effects on salmon growth and survival, and the North Pacific Ocean and the Bering Sea have experienced significant climate shifts in recent decades. This project will reconstruct indices of annual and seasonal growth of Yukon River fall chum salmon for each year from 1964-2009. Growth measurements during the 46-year period will be used to examine relationships among chum salmon growth, survival, and the influence of climate change and pink salmon abundance on growth.	ADF&G, Commercial Fisheries Division	7/1/10	6/30/13	$141,866	AYK (Yukon River)
44515	High Resolution SNPs for Chinook	2009	The fine-scale genetic structure and migration corridors of Chinook salmon spawning along the Bering Sea coast of western Alaska are poorly understood. Valuable resources for subsistence fisheries, these populations, termed the Western Alaska Coastal group, are caught as bycatch in the Bering Sea fishery in walleye pollock fisheries. This project will use high-density DNA sequencing to discover novel high resolution single nucleotide polymorphisms (SNPs) to more precisely and accurately identify the component drainages of the group.	ADF&G, Commercial Fisheries Division	7/1/10	6/30/12	$403,150	AYK

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
44519	Pilot Station Sonar Acoustic Tags	2009	This project will acoustically tag 150 Chinook salmon and 150 chum salmon during each of two operational seasons to determine the physical distribution of adult salmon as they migrate in the Yukon River past the sonar project at Pilot Station. This will allow evaluation of current assumptions about the detectability of Chinook and chum salmon with the shore based sonar, and the availability of these fish to drift gillnets used in species apportionment, ultimately identifying areas to improve current methods	ADF&G, Commercial Fisheries Division	7/1/10	6/30/13	$657,176	AYK (Lower Yukon River)
44521	Shared Chum Baseline Development	2009	There is a pressing need to improve and enhance the Bering Sea/North Pacific chum salmon baseline of genetic markers to provide greater resolution in mixed stock genetic analysis (MSA). This project will develop new single nucleotide polymorphism (SNP) markers that focus specifically on delineation of western Alaskan populations (including those from Norton Sound and the lower Yukon and Kuskokwim Rivers) and add microsatellite data for about 19 key populations and SNP data for about 36 populations. This project complements AKSSF project 45165 (700) *Shared Chum Salmon Baseline Gap Analysis* which funds a gap analysis to identify deficiencies in the genetic sample locations, sample sizes, and sample quality for Bering Sea/North Pacific chum salmon populations and adds missing SNP and microsatellite data for 10-12 key populations.	School of Fisheries and Ocean Sciences (SFOS), UAF NMFS, Auke Bay Laboratories (ABL)	9/1/10	9/30/12	$330,054	AYK
44522	SNP Panels for Chinook Salmon	2009	This project will screen 288 single nucleotide polymorphisms (SNPs) to improve genetic stock identification in the Arctic-Yukon-Kuskokwim (AYK) region. This large SNP set will enable the use of linked SNPs, an approach that reveals clear population differences not otherwise apparent. Additionally, this large SNP set will enable individual panels that may be enriched with high-resolution outlier SNPs that have discriminating power specific to problem identification within Norton Sound, the Yukon, Kuskokwim, and Nushagak River drainages, as well as in the Bering Sea bycatch.	School of Aquatic and Fishery Sciences (SAFS) University of Washington	9/1/10	13/31/12	$207,428	AYK
44526	Chena River Chinook Escapement - Ph 2	2009	This project will estimate Chinook salmon escapement on the Chena River using a combination of tower and dual-frequency identification sonar (DIDSON) counts. This project will also estimate the age, sex, and length (ASL) composition of the Chinook escapement from spawned-out carcasses. Accurate escapement estimates are necessary to manage the stock and ensure a continued subsistence fishery. This project continues work begun in AKSSF project 45735.	ADF&G, Sport Fish Division	6/1/11	11/30/13	$208,257	AYK (Upper Yukon River)
44527	Rapids Student Data Collection - 2011-2013	2009	This project will collect Chinook salmon sex, length, weight, and girth data (SLWG) and Ichthyophoniasis disease prevalence data from salmon caught in subsistence fisheries near Rampart Rapids (Rapids). This information will provide baseline data for future use by fishery managers. In addition, genetic tissue sampling will be conducted to help managers reconstruct the Canadian component of the run, and a visual inspection of changing flesh color and fat content in chum salmon will help develop a fall chum arrival date in the mid and upper Yukon River. This project continues work begun in AKSSF project 45124 (700).	Rapids Student Data Collection - 2011-2013	5/15/11	11/30/13	$59,657	AYK (Upper Yukon River)
44530	Stream Bank Restoration, Fairbanks Cost Share - Phase 2	2010	The Fairbanks Cost Share Project (Project) is a financial incentive and educational outreach project directed towards public land managers and private landowners. The Project provides funding and technical project design assistance to sustain and enhance valuable salmon habitat in the Fairbanks area. ADF&G will partner with the United States Fish and Wildlife Service (USFWS), nonprofit organizations, local government, and landowners to conduct a project to rehabilitate and sustain salmon habitat in watersheds of the Fairbanks area over a three year period. Using an annual habitat rehabilitation workshop, consultation with landowners and onsite inspections, project staff will educate landowners, public land managers and the general public on the components and value of fish habitat, and provide technical planning and permitting assistance.	ADF&G, Sport Fish Division	7/1/11	11/30/13	$178,634	AYK (Upper Yukon River)
44606	Yukon River Juvenile Chinook Survey	2010	Yukon River Chinook salmon is one of the key salmon stocks supporting Alaskan and Canadian subsistence fisheries, but recent declines in Chinook salmon returns to the Yukon River have resulted in restricted subsistence harvests. Sources of recent production declines are unclear and emphasize the need for additional information on the production dynamics of Yukon River Chinook salmon. This project will assess the status of juvenile Yukon River Chinook salmon during their first summer at sea and identify how juveniles are linked to the Bering Sea ecosystem through trawl and acoustic surveys, stock composition analyses, and nutritional status evaluation. These data will reduce uncertainty in the production dynamics, thereby benefitting the management of this important subsistence fishery.	National Marine Fisheries Service (NMFS), ABL, TSMRI	4/1/11	10/30/13	$242,215	AYK

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
44610	Video Monitoring Escapement Sinuk	2010	This project tests the feasibility of operating a remote video system to monitor salmon escapement in the Sinuk River in northern Norton Sound. Following the design of other remote video systems used around the state, an underwater camera will be deployed to record images of salmon passing through a weir; those images will be enumerated and compared to weir counts to evaluate accuracy. Data from this project will be used in concert with other escapement estimates to manage subsistence salmon harvests within the Nome Subdistrict.	ADF&G, Commercial Fisheries Division	4/1/11	12/15/11	$70,010	AYK (Norton Sound)
44614	Unalakleet Salmon Productivity	2010	This project will investigate how Chinook and coho salmon in the Unalakleet River drainage are influenced by inter-specific competition between rearing Chinook and coho salmon and by escapements of all salmon species in the drainage. Biologists from private, state, and federal agencies have hypothesized that pink and chum salmon may be benefitting coho salmon in the form of marine-derived nutrients (MDN) and that coho salmon may, in turn, be competing with Chinook salmon in the Unalakleet River. This project will 1) estimate the productivity and condition of Chinook and coho salmon smolt migrating from the Unalakleet River drainage, and 2) measure their diet content, marine-nutrient uptake, and relative density. A series of hypotheses will serve as the framework for interpreting how correlative relationships between estimated smolt production and escapement estimates of all salmon species are supported by estimates of smolt and parr condition, diet composition, marine-nutrient uptake, and relative density and distribution. Results from this study will ultimately be used to improve forecasting models for both Chinook and coho salmon.	ADF&G, Sport Fish Division	4/1/11	11/30/13	$312,394	AYK (Norton Sound)
44619	Yukon Juvenile Chum Stock Analysis	2010	This project will use genetic analysis to investigate the stock composition of juvenile chum salmon collected on the northeastern Bering Sea shelf. The results will be used to determine the stock contribution of juvenile chum salmon, compare the distribution across years, determine the relative percentage of juvenile summer and fall Yukon River chum salmon in the northeastern Bering Sea, and relate the relative estimated proportions of summer- and fall-run juveniles to adult Yukon River returns. Information gathered through this project is vital to understanding chum salmon ocean life history, whether juvenile relative abundance indices can be developed for understanding ocean and river mortality, and in developing future forecasting models. These models will assist with management of the Yukon River chum stocks to help aid subsistence fishing opportunities.	NMFS, Auke Bay Laboratories	7/1/11	11/30/13	$100,000	AYK (Lower Yukon)
45759	Copper River Chinook GSI	2006	This project will complete genetic stock identification (GSI) analysis on Chinook salmon tissue samples collected from commercial net fisheries in areas in and near the Copper River. The analysis will be focused on tissue samples collected in the Copper River District in May-June 2008, adding a fourth year of GSI on these stocks to support improved management of Copper River fisheries.	ADF&G, Commercial Fisheries Division	4/22/11	6/30/11	$50,043	Central
45176 (700)	AFDF: Salmon Education Campaign	2006	This project will educate Alaskans and raise awareness about the importance of the commercial salmon fishing industry to Alaska. The program's key messages will be presented in printed materials, on the Internet, and through direct mail outreach.	AFDF: Alaska Fisheries Development Foundation	12/29/10	3/31/11	$27,500	Central
45893	Biotic Evaluation of Fish Passage	2007	Current methods to assess fish crossing structures are based on physical measures and mathematical models. This project will examine the abundance of juvenile salmon above and below barriers to migration in order to refine these models and determine the type and location of barriers that have the most significant influence on juvenile salmon distribution.	Aquatic Restoration and Research Institute	7/1/10	4/30/12	$74,624	Central
45926	PWS and CI Sockeye Growth and Climate	2008	Sockeye salmon are important to subsistence and commercial fisheries in Alaska, but recent changes in climate may have had significant effects on salmon growth and survival. New evidence indicates highly abundant pink salmon can affect sockeye growth and survival at sea. This project will use growth measurements over time to examine relationships among sockeye salmon growth, productivity (survival), and the influence of climate change on growth (e.g., the 1976/77 and 1989 ocean regime shifts and the 1997/98 El Niño) as well as to evaluate potential effects of hatchery and wild pink salmon on growth and survival of three sockeye salmon populations in Prince William Sound (PWS) and Cook Inlet (CI).	Natural Resources Consultants, Inc. (NRC) ADF&G, Commercial Fisheries Division	7/1/11	3/31/13	$225,902	Central
44608	Mat-Su Salmon Habitat Management	2010	This project will conduct comprehensive species-specific surveys along the Knik River, Moose Creek, Kroto Creek, and Trapper Creek to identify, establish management plans, control, and monitor invasive plant species that impact salmon habitat and compromise salmon reproduction. Specific invasive plant species identified as deleterious to the above salmon habitats, including reed canary grass (Phalaris arundinacea) and white sweet clover (Melilotus alba), will be controlled and prevented.	Palmer Soil and Water Conservation District (PSWCD)	4/1/11	11/30/13	$312,320	Central

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
44621	Chignik and Black Lake Habitat Decline	2010	Chignik and Black Lakes support sockeye salmon stocks used in subsistence fisheries. Using historical collections of adult sockeye salmon scales, this project will reconstruct a time series of sockeye growth in Black and Chignik lakes since the early 1960s in order to evaluate the response of sockeye salmon growth and productivity to changes in habitat and to examine the magnitude of size-dependent mortality at sea in relation to ocean conditions. This information will help fisheries managers assess the capacity of the lake system to support sockeye salmon and to adjust escapement goals as needed.	Natural Resources Consultants, Inc. (NRC) ADF&G, Commercial Fisheries Division	7/1/11	11/30/13	$183,734	Central
44516	Lower Copper River Chinook Baseline	2009	This project expands the genetic and tissue sample collection for Chinook salmon spawning in the Copper River drainage. Representation of lower Copper River drainage Chinook salmon populations in the baseline is critical for conducting accurate genetic stock identification. Resolution of lower river stocks is currently restricted due to incomplete representation of populations within the Chitina and Tonsina rivers.	ADF&G, Commercial Fisheries Division	7/1/10	6/30/13	$233,285	Central
45755	BBSRI: Port Moller Sonar Modification 2011	2006	This project will modify and improve sonar technology developed and supported in AKSSF projects 45092 (600) and 45730. In addition to allowing the sonar systems to obtain fish swimming speed and direction, modifications include 1) adjustments to the printed circuit board (PCB), 2) software modification, and 3) and improvements to system calibration and system gain.	Bristol Bay Science and Research Institute (BBSRI)	1/1/11	3/31/11	$31,654	Central (Bristol Bay)
45756	BBSRI: Egegik River Sonar	2006	The Bristol Bay Science and Research Institute will build two up-looking sonar systems to enumerate salmon smolts on the Egegik River in 2011.	Bristol Bay Science and Research Institute (BBSRI)	1/21/11	3/31/11	$138,422	Central (Bristol Bay)
45757	BBSRI: Modifications to the Bristol Bay Smolt Sonar System	2006	This project will design and build new smolt sonar components to be integrated into existing/newly developed smolt sonars operated by the Bristol Bay Science and Research Institute (BBSRI). BBSRI will build a total of three up-looking and three side-looking sonars to be operated on the Kvichak, Ugashik, and Egegik rivers in 2011. This project will ultimately lower annual operating costs, reduce power consumption, and cut down on human error in the field. This project continues work begun in AKSSF projects 45092 (600), 45730, 45729 and 457xx (Egegik River Sonar).	Bristol Bay Science and Research Institute (BBSRI)	1/13/11	3/31/11	$134,317	Central (Bristol Bay)
44512	Kvichak Sockeye Sonar Assessment	2009	This project will deploy a side-looking dual frequency identification sonar (DIDSON) on the Kvichak River to provide inriver sockeye salmon abundance estimates for four seasons. The accuracy of the DIDSON's sonar counts will be compared with other counts on the river and operational logistics and costs will be compared with the existing gillnet test fishery to determine if the DIDSON should replace the test fishery. More accurate abundance estimates will assist fishery managers to manage the stock, ensure that escapement goals are met, and that the resource is available for commercial and subsistence users.	ADF&G, Commercial Fisheries Division	6/15/10	3/15/04	$312,500	Central (Bristol Bay)
44518	Nushagak River Chinook Evaluation	2009	This project will use acoustic tags and mapping tools to determine where in the Nushagak River Chinook salmon migrate. This information, in conjunction with sonar estimates, will provide both a more comprehensive Chinook salmon inriver estimate and a recommendation for modifying sonar operations to more accurately assess Chinook salmon escapement.	ADF&G, Commercial Fisheries Division	7/1/10	3/15/14	$822,295	Central (Bristol Bay)
45894	Wasilla Creek Flow Protection	2007	This project will fund continued collection of hydrologic data from gage #15285000 located on Wasilla Creek. Data from this gage are requisite for a reservation of water needed for the protection of stream flows that support continued production of salmon.	ADF&G, Sport Fish Division	7/21/10	3/31/12	$26,574	Central (Cook Inlet)
45922	Kenai River Smolt Abundance Phase 3	2008	This project will estimate the abundance of sockeye salmon smolts emigrating from the Kenai and Russian Rivers. Annual sockeye salmon smolt population estimates will be used to build life-history brood tables needed to improve forecasts, evaluate escapement goals, and examine effects of ocean conditions on stock productivity. *This project continues work begun in AKSSF projects 45571 and 45144 (700).*	ADF&G, Commercial Fisheries Division	5/1/10	3/31/13	$726,876	Central (Cook Inlet)
45923	Mat-Su Basin AWC – Yr. 2	2008	This project will partially fund a continued survey of anadromous waters in the Mat-Su basin, thus broadening the region's coverage in the state's Anadromous Waters Catalog (AWC). The information collected will be used by resource managers to protect and manage freshwater habitats that support salmon. Inclusion in the AWC provides specific protections in law for important water bodies. *This project continues work begun in AKSSF project 45885.*	U.S. Fish and Wildlife Service	7/1/10	3/31/11	$23,303	Central (Cook Inlet)
45924	Wintering Ecology of Juvenile Coho	2008	This project will assess variation in the density, condition (size and body composition at smolting), and overwinter survival of juvenile salmon relative to habitat type. It will also characterize critical wintering habitats of the Anchor River on a basin-scale assessment through a remote sensing survey of off-channel habitats. Together this information will identify critical habitats for sustained coho production in one of the most important river systems on the southern Kenai Peninsula.	ADF&G, Kachemak Bay Research Reserve (KBRR)	7/1/10	12/31/12	$350,257	Central (Cook Inlet)

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44513	Campbell Estuary Protection	2009	The Campbell Estuary Protection project will permanently protect 60 acres of critical estuarine habitat for all five species of North Pacific Salmon through the acquisition and conservation of two parcels containing Campbell Creek, Campbell Creek Estuary, and an upland buffer. Great Land Trust will purchase the properties from willing landowners and transfer the fee simple title to the Municipality of Anchorage while retaining a conservation easement. This will ensure that the property will be protected in perpetuity from development	Alaska Department of Natural Resources (DNR)	6/8/10	6/30/11	$550,000	Central (Cook Inlet)
44514	SC Hydrologic Adjudication Support – Yr. 2	2009	This project will fund a DNR hydrologist for 4.5 months over three years to assist with the hydrologic components of existing and future ADF&G reservation of water applications under the Alaska Water Use Act (AS 46.15) and provide hydrologic technical support to ADF&G for salmon-producing waterbodies in Central Alaska. DNR and ADF&G will also implement a memorandum of agreement to improve processing of water reservations on a timely basis and provide hydrologic assistance for water quantity and quality issues related to anadromous waterbodies in Central Alaska. This project continues work begun in AKSSF project 45909.	Alaska Department of Natural Resources (DNR)	7/1/10	6/30/13	$42,225	Central (Cook Inlet)
44517	West Cook Inlet Chinook Baseline	2009	This project is the first phase of a two-phase plan to develop and apply mixed stock analysis (MSA) to Chinook salmon harvests in Cook Inlet using genetic data. This project expands the baseline of tissue samples and genetic data available for Chinook salmon spawning in the river systems that drain into the western, northeastern, and Knik Arm areas of Cook Inlet.	ADF&G, Commercial Fisheries Division	7/1/10	6/30/13	$188,693	Central (Cook Inlet)
44523	Mat-Su Instream Flow Protection Yr 3	2009	This project will collect and analyze the hydrological data necessary to protect instream flows in two reaches of Meadow Creek and two reaches of Fish Creek that are important to the production of salmon in the Matanuska-Susitna Basin (Mat-Su). These streams are deemed a high priority for salmon habitat protection by ADF&G, the Alaska Clean Water Actions Program (ACWA), and the Mat-Su Basin Salmon Conservation Partnership. *This project continues work begun in AKSSF project 45868 and 45891.*	ADF&G, Division of Sport Fish – RTS	10/1/10	6/30/12	$53,310	Central (Cook Inlet)
44529	Mat-Su Stormwater Assessment	2009	This project continues work designed to protect Wasilla Creek, Cottonwood Creek, and Little Meadow Creek from the effects of urbanization on water quality and fish habitat. All three creeks are important for salmon spawning and rearing: Wasilla Creek supports coho, Chinook, and chum salmon, and both Cottonwood Creek and Little Meadow Creek are lake-stream systems important for the spawning and rearing of sockeye and coho salmon. This project will investigate where polluted stormwater impacts are occurring in target waters, the degree and extent of these impacts, what pollutants are of most concern, and what the effects are to fish habitat. This information is critical to understanding the impacts of pollutants transported by urban stormwater runoff on these salmon streams and to assist resource managers in making effective and targeted decisions to protect these habitats.	DEC, Water Quality Standards, Assessment and Restoration	7/1/11	6/30/13	$141,439	Central (Cook Inlet)
44612	Kenai Cost Share Project – Phase 2	2010	This project provides funding and technical project design assistance to sustain and enhance valuable salmon habitat on the Kenai Peninsula through a financial incentive program directed towards public land managers and private landowners. ADF&G will partner with the United States Fish and Wildlife Service (USFWS), nonprofit organizations, local governments, and landowners to conduct projects to rehabilitate and sustain salmon habitat over a three year period, providing technical planning and permitting assistance as needed. This project continues work begun in AKSSF projects 45522, 45880, and 45886.	ADF&G, Sport Fish Division	4/1/11	11/30/13	$406,021	Central (Cook Inlet)
44613	Use of Water Guns to Control Northern Pike	2010	This project will test new methods for controlling invasive northern pike populations in central Alaska utilizing sound pressure generated with a water gun. A dose response to various sound energy levels on fish survival will be tested along with the utility of using sound to divert pike into gillnets. Additional pike eradication and control methodologies will also be explored.	U.S. Geological Survey	4/4/11	6/30/13	$383,285	Central (Cook Inlet)
45092	BBSRI: Port Moller Sonar Development - Ph. 1 of 2	2005	This project is Phase I of a two-phase research project to design and operate a low-cost, low-power sonar system to characterize fish behavior and enumerate salmon returning to Bristol Bay, Alaska. This first phase is an investment in the non-recurring engineering and components to design and build an onboard computer, acoustic transceiver, power and data storage systems, and a communication link with the surface.	Bristol Bay Science and Research Institute (BBSRI)	1/15/10	3/31/10	$98,007	Central (Bristol Bay)
45724	BBSRI: Ugashik River Sonar	2006	The Bristol Bay Science and Research Institute (BBSRI) will build two up-looking sonar systems to count salmon smolts on the Ugashik River in May and June, 2010. These sonar systems will be operated by BBSRI approximately 50 m below the outlet of the Lower Ugashik Lake. Separate funding sources will support the deployment and operation of these systems. BBSRI will prepare a project report providing a summary of the field program, analysis of the acoustic data, and abundance estimates of seaward bound sockeye salmon smolts. This report will be made available to ADF&G.	Bristol Bay Science and Research Institute	2/1/10	6/30/10	$88,411	Central (Bristol Bay)

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45729	BBSRI: Engineering Improvements Bristol Bay Sonar	2006	This project will make several substantial improvements to an up-looking sonar system that is currently owned by the Bristol Bay Science and Research Institute (BBSRI) and operated cooperatively with ADF&G to count sockeye salmon smolts on the Kvichak River in Bristol Bay, Alaska. These modifications include: (1) adding a tilt sensor to each sonar pod, (2) modifying the software so the sonar pods can automatically mount to the network attached storage (NAS) device, (3) designing a procedure that would allow the user to systematically calibrate the sonar each year, and (4) testing an alternative power source to allow sonar to run autonomously for longer periods.	Bristol Bay Science and Research Institute (BBSRI)	2/1/10	6/30/10	$47,838	Central (Bristol Bay)
45730	BBSRI: Port Moller Sonar, Ph.2 of 2	2006	This project is the continuation of a two-phase project to design and operate a low-cost, low power sonar system to characterize fish behavior and enumerate salmon returning to Bristol Bay. During phase I of this project the Bristol Bay Science and Research Institute (BBSRI) invested in the non-recurring engineering costs to design and build one up-looking sonar, data storage system, and communication link. Phase II will entail building three additional sonar systems, one communication link, and the operation of the sonar systems in the Bering Sea near Port Moller, Alaska in 2010. *This project continues work begun in AKSSF project #45092 (600).*	Bristol Bay Science and Research Institute (BBSRI)	3/20/10	12/31/10	$206,355	Central (Bristol Bay)
45892	Big Lake Spawning Distribution	2007	The Big Lake system is a significant physical feature of northern Cook Inlet, yet very little is known about sockeye and coho salmon spawning distributions in the watershed. This project will direct efforts to identify and maintain wild salmon populations and salmon habitats by describing the watershed's run-timing and spawning distributions of sockeye and coho salmon. The results will provide needed baseline data for fishery and habitat managers. The overall goal is to provide information needed for protection and restoration of the spawning habitats in the Big Lake drainage.	U.S. Fish and Wildlife Service (USFWS)	7/1/10	5/1/11	$46,808	Central (Cook Inlet)
44620	Northern Cook Inlet Chinook Weirs	2010	In October 2010, ADF&G recommended six of the 27 Northern Cook Inlet (NCI) Chinook stocks as Stocks of Concern (SOCs) to the Alaska Board of Fisheries (BOF) because of declining runs that were failing to meet escapement goals. These stocks are assessed annually by a single aerial survey conducted in mid-July, but the run timing and inriver abundance of these stocks is unknown. This project will establish weirs on two NCI rivers to enumerate the entire run of two SOC stocks; the resulting data will improve knowledge of run strength, annual variability, and whether the current single aerial surveys reliably monitor trends in escapement.	ADF&G, Sport Fish Division	4/1/11	11/30/14	$301,103	Central (Cook Inlet)
44607	ADNR RCS - Kenai Peninsula	2010	The Alaska Department of Natural Resources, Division of Forestry (DNR-DOF), will inventory all non-federal forest roads on the Kenai Peninsula by using GIS, satellite or low altitude imagery, and field surveys. The ground survey work will examine the 370 mile road system by foot, ATV, or passenger vehicle (if road is passable) with the assistance of ADF&G, Division of Habitat. The field surveys will review compliance with the Alaska Forest Practices and Resources Act (FRPA), survey all crossing structures, and perform detailed surveys on crossing structures requiring fish passage. A graphic and tabular data set will be generated that will show the best management practices and their compliance with FRPA regarding the road system and all crossing structures, with all sub-standard crossing structures or road systems (impeding fish passage) flagged for further attention.	Alaska Department of Natural Resources, Division of Forestry	4/1/11	11/30/13	$155,132	Central (Cook Inlet)
44617	Invasive Northern Pike Suppression	2010	Northern pike is an invasive predatory fish in central Alaska that is responsible for the loss of several fisheries across the region. Alexander Creek in the Susitna River basin is one of the most heavily impacted systems. This project will attempt to restore the quality of salmon rearing habitat in Alexander Creek by annually reducing the number of northern pike spawners in its slow backwaters. Reducing the density of northern pike will increase salmon production in this system by reducing the mortality rate of juvenile salmon. Research will also be conducted to better understand movement patterns of northern pike in Alexander Creek and to evaluate the success of the suppression effort in order to inform and enhance pike suppression efforts.	ADF&G, Sport Fish Division	4/1/11	11/30/13	$609,391	Central (Cook Inlet)
44524	Protecting Salmon from RCG - Ph 3	2009	This project will continue Kenai Watershed Forum's efforts to control invasive reed canary grass (RCG) along waterways on Alaska's Kenai Peninsula. Efforts will consist of monitoring and physical removal of RCG on the Kenai River, Beaver Creek, Slikok Creek, and Johnson Lake, as well as initiating the process to obtain permits for targeted herbicide application. Removing RCG that is detrimentally affecting stream morphology and water quality will restore salmon habitat and prevent the spread of RCG to healthy salmon habitat. This project continues work begun in AKSSF projects 45860 and 45917.	Kenai Watershed Forum (KWF)	4/1/11	11/30/13	$134,876	Central (Cook Inlet)

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
44609	Developing Tools to Assess Pike Control	2010	The proliferation of introduced northern pike in central Alaska is an urgent fishery management concern because pike are voracious predators that prey heavily on juvenile salmonids. Eradication of pike may not be possible in connected freshwater networks, so managers must develop control methods to reduce pike populations to less destructive numbers. This project will use a field and modeling approach to develop quantitative tools that will allow managers to (1) characterize the impact of pike predation on salmonid productivity, (2) prioritize habitats that need pike control, and (3) assess the effectiveness of pike control efforts on salmonid productivity. This project will be tightly linked to concurrent ADF&G pike removal efforts.	U.S. Geological Survey (USGS), North Rocky Mountain Science Center	4/1/11	11/30/13	$276,333	Central (Cook Inlet)
45878	Mat-Su Basin Fish Passage Inventory	2007	This fish passage inventory will identify the actual number, type, and location of unevaluated stream crossings remaining in the Mat-Su Borough (MSB) and determine the proportion of these stream crossings that may be barriers to fish movement. Subsequently, ADF&G will identify a subset of the highest priority crossing sites and offer recommendations for restoration of fish passage. The ultimate goal of the project is to enable the restoration or improvement of access to upstream salmonid habitats that have been degraded by stream-road crossings.	ADF&G, Sport Fish Division	7/1/09	3/31/12	$509,428	Central (Cook Inlet)
44506	Kenai Peninsula Fish Passage 2010-2011	2009	This project will restore unimpeded fish passage to 2.61 miles of documented rearing habitat, 0.14 miles of documented spawning habitat, and 3.5 miles of additional mapped streams through the removal of five crossings that are currently barriers to fish passage. Replacement structures will be oversized and embedded culverts or bottomless arch culverts designed using a stream simulation methodology to allow unimpeded passage of juvenile and adult salmonids to adjacent habitats. At one site the existing failing bridge will be replaced with a new bridge.	ADF&G, Sport Fish Division	5/1/10	12/31/11	$259,364	Central (Cook Inlet)
44507	Headwater Stream Rearing Habitat	2009	Headwater streams provide important habitat for juvenile salmon on the lower Kenai Peninsula though their importance is often overlooked. Using improved remote imaging technology, this project will develop tools to better identify important headwater streams and the landscape features that contribute to differences in headwater stream habitat. The project will also measure the ability of alder patches in the watershed to contribute nitrogen-rich nutrients that support aquatic life.	ADF&G, Sport Fish Division Kachemak Bay Research Reserve	5/1/10	9/30/12	$310,866	Central (Cook Inlet)
45289	Columbia River Inter-Tribal Fish Commission: Stock Assessment and Research Plan for Mid-Columbia River Summer Chinook - Part 2	2002	Obtain biological information on natural production of the Columbia River Summer Chinook population. Obtain detailed production information on the Methow River including adult escapement and juvenile outmigration estimates. Detailed field operation programs will be operated and supervised by Columbia River Inter-Tribal Fish Commission.	ADF&G, Commercial Fisheries Division	5/1/05	6/30/06	$113,300	Columbia River
45785	CRITFC: Hanford Reach Chinook Migration and Survival	2006	This project will coordinate and facilitate the PIT-tagging of up to 20,000 Hanford Reach upriver fall Chinook salmon smolts annually in May/early June 2007 and 2008. PIT tags will be detected at downstream dams in juvenile bypass systems and this information will be used to produce reach fish travel time survival estimates. Results will be compared to performance in previous years and to hatchery and Snake River releases. Smolt-to-adult travel time, survival, and straying rates will be estimated after adults return. This will allow fish managers to better assess the impact of flows and spill on these variables.	Columbia River Inter-Tribal Fish Commission (CRITFC)	4/1/07	6/30/09	$253,052	Columbia River
45061	CRITFC: Columbia Hatchery Assessment	2000	Identify improved Chinook hatchery strategies for the Columbia River, which will result in additional harvest in Southeast AK fisheries.	Columbia River Inter-Tribal Fish Commission	3/1/03	12/1/03	$8,031	Columbia River
45057	CRITFC: Deschutes Salmon Count Strategy	2000	Research to measure the retention of coded-wire tags, part of a feasibility study of establishing a coded-wire tag program for Deschutes River fall Chinook.	Columbia River Inter-Tribal Fish Commission	2/1/02	8/1/02	$52,478	Deschutes River
45058	CRITFC: Deschutes River Fall Chinook Feasibility	2000	Research to develop methods for capturing juvenile fall Chinook salmon in the Deschutes River, part of the feasibility study for a coded-wire tag program.	Columbia River Inter-Tribal Fish Commission	2/1/02	8/1/02	$51,192	Deschutes River
45603	AFDF: Gulf of Alaska Salmon Bycatch Avoidance and Reduction	2005	Explore techniques for salmon bycatch reduction and avoidance in the Gulf of Alaska groundfish fisheries.	Alaska Fisheries Development Foundation (AFDF)	1/1/06	6/4/07	$25,531	Cross-regional
45622	AFDF: Educational Outreach - OK	2005	This project has been an ongoing component of Alaska Fisheries Development Foundation (AFDF) activities; to facilitate a greater level of understanding both within the Alaskan seafood industry and the general public regarding Alaska's salmon fisheries, their realities and potential.	Alaska Fisheries Development Foundation (AFDF)	1/1/06	9/27/07	$255,988	Cross-regional

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45005	CRITFC: Stock Assessment and Research Plan	2000	Catalog essential biological and environmental data pertinent to Mid-Columbia Chinook.	Columbia River Inter-Tribal Fish Commission (CRITFC)	8/1/01	10/1/02	$51,500	Columbia River
45060	CRITFC: Mid-Columbia Summer Chinook	2000	Collect accurate stock assessment data for Columbia River summer Chinook.	Columbia River Inter-Tribal Fish Commission	3/1/03	6/30/05	$573,051	Columbia River
44502	PCSRF Technical Assistance FFY09	2009	This project funds the Alaska Sustainable Salmon Fund (AKSSF) program manager and staff to perform AKSSF program oversight, project management, and fiscal management to ensure appropriate use of federal funds on behalf of the State of Alaska.	Division of Community & Regional Affairs (DCRA)	2/1/10	6/30/14	$778,126	Cross-regional
45158 (700)	AFDF: AK Symphony of Seafood 2011	2006	This project will feature the Alaska salmon industry's innovative new products through two major events. Alaska Fisheries Development Foundation (AFDF) will convene the 18th annual Alaska Symphony of Seafood (ASOS) to showcase new Alaska salmon products and support the winning entries by introducing them at the International Boston Seafood Show (IBSS). *This project continues work begun in AKSSF projects 45068 (600) and 45095 (600).*	Alaska Fisheries Development Foundation (AFDF)	10/27/10	03/31/11	$104,511	Cross-regional
45978	Outreach & Education Grant Program - Year 2	2008	The Alaska Department of Commerce, Community, and Economic Development (Commerce), Division of Community and Regional Affairs (DCRA), will administer the Alaska Sustainable Salmon Fund Outreach and Education Program to educate the public on the value of and types of actions that should be taken for conservation, restoration, and sustainability of healthy Pacific salmon populations and their habitat. Related AKSSF project: 45301 (800).	Alaska Department of Commerce, Community, and Economic Development (Commerce)	1/1/11	3/31/13	$1,030,000	Cross-regional
45170	MOA: Salmon Habitat Restoration	2006	This project will implement specific habitat restoration programs including fish passage improvements along Little Campbell Creek to restore fish passage and improve downstream water quality; and streambank restoration projects in partnership with the Anchorage Park Foundation's Youth Employment in Parks program. This project will also provide funding for the MOA Creeks Coordinator position for salmon habitat related creek and salmon program coordination and administration within the MOA, enhanced monitoring and outcome measurement of AKSSF habitat projects, and coordination with the MOA's Watershed & Natural Resources Commission. *This project continues work begun in AKSSF projects 45508, 45643, 45778, and 45779.*	Municipality of Anchorage (MOA)	7/9/09	3/31/11	$114,744	Central (Cook Inlet)
45780	MOA: Salmon Habitat O&E	2006	This project will educate constituencies on the value of and actions taken for conservation, restoration, and sustainability of healthy Pacific salmonid populations and their habitat, including the preparation of educational materials, training, and citizen participation in conjunction with the strategic planning process.	Municipality of Anchorage (MOA)	7/9/09	6/30/10	$135,354	Central
45685	KRSA: Centennial Angler Access	2007	This project installs an approximately 300 x 8 foot extension to the existing Centennial Campground angler access trail and three 50 x 4 foot ELPs (spaced about 100' apart) with three river access stairways, in an area already used by anglers. The trail extension will bring the total downstream angler access trail length to 2,150 lineal feet.	City of Soldotna Parks and Recreation	91/09	5/15/10	$147,416	Central
45891	Mat-Su Instream Flow - Yr. 2	2007	This project will collect and analyze the hydrological data necessary to protect instream flows in four reaches of streams identified for their importance to the production of salmon in the Mat-Su Basin. Meadow Creek and Fish Creek, the stream systems targeted, are deemed high priorities for salmon habitat protection by ADF&G, Alaska Clean Water Actions (ACWA), and the Mat-Su Basin Salmon Conservation Partnership. *This project continues work begun in AKSSF project #45868.*	ADF&G, Sport Fish Division	10/1/09	9/30/10	$54,716	Central
45908	High Resolution SNPs for Sockeye	2008	This project will use newly developed high throughput sequencing to discover thousands of new SNPs in sockeye salmon and will test the hypothesis that high resolution SNPs, encoded by alleles subject to natural selection, have temporally stable allelic frequencies enabling use of a common baseline data set for periods of decades.	University of Washington, School of Aquatic & Fishery Sciences (UW - SAFS)	6/1/09	6/30/11	$322,929	Central
45909	SC Hydrologic & Adjudication Support	2008	This project will provide DNR with funding to support a hydrologist to assist with the hydrologic components of existing and future ADF&G reservation of water applications and provide hydrologic technical support for salmon-producing waterbodies in Central. This project will help DNR and ADF&G implement the MOU for improving administrative processing of applications on a timely basis and provide hydrologic assistance for water quantity and quality issues related to anadromous waterbodies.	University of Washington, School of Aquatic & Fishery Sciences (UW - SAFS)	7/1/09	6/30/10	$14,436	Central

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FFY 2000-2010

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45297	MOA: Chester Creek Aquatic Ecosystem Restoration, Westchester Lagoon to Cook Inlet - Phase 1, Part 1	2002	Improve fish passage at the Chester Creek outfall to the Knik Arm of Cook Inlet. The Chester Creek Aquatic Ecosystem Restoration Project has two phases: Phase one - utility relocation/partial channel construction, and Phase two - channel restoration with a culvert installation to restore the Chester Creek channel allowing for increased fish passage.	Municipality of Anchorage (MOA)	1/15/06	6/30/07	$1,941,748	Central (Cook Inlet)
45506	MOA: Ship Creek Fishing Access	2004	Removing failing culverts at Ship Creek will eliminate an access point to the creek bed at lower tide stages. Replacing this access will be needed to maintain angler participation. Plan the location of angler improvements so they mesh with long term goals for this area.	Municipality of Anchorage (MOA)	10/1/04	6/30/09	$168,726	Central (Cook Inlet)
45507	MOA: Ship Creek Fish Passage - Phase II	2004	*Continue efforts from project 45466.* This phase II portion of the project will complete the access area adjacent to the bridge. In addition, the bridge deck will receive waterproofing and pavement to prolong the life of the span.	Municipality of Anchorage (MOA)	8/1/05	7/1/07	$286,790	Central (Cook Inlet)
45509	MOA: Water Quality Monitoring and Education project	2004	Partners with the Anchorage Waterways council and the citizens of Anchorage to support water quality education and monitoring to maintain health of Anchorage creeks for salmon restoration. The Stream Team program maintains fifteen monitoring sites located on Ship, Chester, Campbell, and Little Campbell Creeks in Anchorage. Salmon populations using these creeks will be dramatically affected by non-point source pollution.	Municipality of Anchorage (MOA)	1/1/06	12/31/07	$87,612	Central (Cook Inlet)
45511	MOA: Salmon in the City - Stewardship Initiative (DNR)	2004	This project develops and produces interpretive displays as part of the Salmon in the City program including 17 single-panel displays and 9 panels for three-way "anchor" displays along the Campbell Creek Interpretive Trail. Twelve panels for three-way displays along Chester and Ship Creeks will also be produced.	Department of Natural Resources, Alaska State Parks (DNR)	3/1/06	6/30/09	$232,780	Central (Cook Inlet)
45512	MOA: Salmon in the City - Stewardship Initiative (ADF&G)	2004	As part of the Salmon in the City program, this project provides for development of a Salmon in the City logo; fact sheets on the program and restoration efforts in the Municipality of Anchorage; three salmon stewardship mobile outreach displays; and four salmon habitat/stewardship awareness video PSAs.	ADF&G, Sport Fish Division	3/1/06	6/30/09	$45,945	Central (Cook Inlet)
45513	MOA: Salmon in the City	2004	This project contributes to the Salmon in the City program with the production of interpretive mobile outreach displays, a public awareness survey, and participation in salmon-related events in the Anchorage area.	Municipality of Anchorage (MOA)	3/1/06	6/30/09	$228,634	Central (Cook Inlet)
45514	MOA: Chester Creek Aquatic Ecosystem Restoration - Westchester Lagoon to Cook Inlet - Phase II, Part I	2004	Project includes the final design and construction of a fish passage culvert at the mouth of Chester Creek. The project will install an 18-foot diameter culvert, approximately 120 feet long, under the existing railroad embankment. The final culvert design will ensure that flow velocity in the culvert not exceed 2.5 fps, with a desired flow velocity as close to 1 fps as possible. Work will likely require modifications of up to 190 feet of existing bike trail and construction of public education and interpretation displays.	Municipality of Anchorage (MOA)	8/30/06	6/30/09	$159,403	Central (Cook Inlet)
45514	MOA: Ship Creek Restoration and Access Project, Schedule C - Part 2	2004	The Municipality of Anchorage (MOA) proposes to stabilize selected creek banks, prevent bank trampling, and direct fishing access from the new MOA Bridge near Ship Creek Point to the vicinity of the Knik Arm Power Plant (KAPP) Dam. *Part 2 objectives: Schedule C items C-8; and partial costs for C-2 & C-5.*	Municipality of Anchorage (MOA)	10/1/07	6/30/09	$32,187	Central (Cook Inlet)
45521	KRSA: Kenai River Chinook Genetics Baseline	2004	Develop a genetic baseline database for Kenai River Chinook salmon. Estimate and determine overlap in the return timing of tributary and mainstem spawning Kenai River Chinook salmon.	ADF&G, Sport Fish Division	4/1/05	6/30/08	$184,628	Central (Cook Inlet)
45522	KRSA: Kenai River Restoration Cost Share	2004	ADF&G, along with the cooperating partner U.S. Fish and Wildlife Service, will conduct a programmatic approach to restore and sustain fish habitat on approximately 130 riverfront properties on the Kenai River over the next four years.	ADF&G, Sport Fish Division	5/1/05	6/30/09	$471,730	Central (Cook Inlet)
45523	KRSA: Slikok Creek Restoration Project	2004	Construct bank protection gratewalk, angler access stairways, install cabled spruce trees revetments, and re-establish bank vegetation for better riparian function, bank stabilization, and fish habitat. This will allow Alaska Department of Natural Resources to reopen the riverbank at Slikok Creek.	Kenai Peninsula Economic Development Corporation	5/1/05	5/31/09	$293,994	Central (Cook Inlet)
45524	KRSA: Evaluation of Culvert Influence on Seasonal Movements of Juvenile Salmonids in a Kenai River Tributary	2004	Passive integrated transponder (PIT) technology will be used to monitor juvenile salmonid behavior near a culvert located at Slikok Creek, a tributary to the Kenai River, that provides spawning and rearing habitat for Chinook and coho salmon. The study will assess fish movements during two phases: 1) for the existing culvert (2006-2007), and 2) for the replacement culvert (2007-2008) to evaluate whether juvenile fish passage conditions were improved.	ADF&G, Sport Fish Division	2/16/06	3/15/09	$212,164	Central (Cook Inlet)

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FFY 2000-2010

Current to September, 2011

Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45528	KRSA: Analysis of Size – Selective Kenai King Salmon Fisheries and Regulations	2004	This project will evaluate current information on the effectiveness and assumptions of fishery regulations designed to address size selectivity of Kenai king salmon fisheries. The Kenai produces the largest king salmon in the world and this project addresses a concern that the biggest fish in the run might have been selectively overfished.	S.P. Cramer & Associates, Inc.	3/1/06	3/30/09	$15,614	Central (Cook Inlet)
45529	KRSA: Kenai River Sockeye Salmon Inriver Abundance	2004	A mark-recapture experiment will be conducted cooperatively between Commercial Fisheries and Sport Fish Divisions, and Cook Inlet Aquaculture Association to estimate passage (abundance) of Kenai River sockeye salmon at river kilometer 31.4. Sockeye will be captured at 31.4 river kilometer and tagged and marked. Sockeye will be recaptured at 45.3 and counted for marked and tagged and non-marked and non-tagged. In addition to capture and recapture by fishwheels, the project will utilize weirs at 45.3 river kilometer and at the outlet to Hidden Lake.	ADF&G, Commercial Fisheries Division	2/16/06	5/1/09	$470,733	Central (Cook Inlet)
45618	KRSA: Flow Monitoring Kenai River Tributaries	2005	Project will monitor and document the annual flow (discharge) of water volume in three anadromous tributaries of the Kenai River: Soldotna, Slikok, and Beaver Creeks. Data collected from this effort will result in an annual hydrograph and water quantity yield. These three creeks were selected because they are important salmon-bearing streams and a significant portion of their watersheds are subject to improvement with very little control on the type of development.	Kenai Peninsula Economic Development District (KPEDD)	5/1/07	6/30/09	$67,262	Central (Cook Inlet)
45619	KRSA: Temperature Monitoring Kenai River Tributaries	2005	Project will program and then deploy HOBO tidbit temperature loggers at selected streams in early spring, recording exact location with differential GPS. In the late fall, personnel will retrieve the loggers and download data, compiling and summarizing the results over the winter. This project will collect baseline temperature data with a documented and repeatable methodology; reduce this baseline data into reasonable summary statistics along with raw data records; and ensure the data is archived in a national database with public internet access.	Kenai Peninsula Economic Development District (KPEDD)	5/1/07	6/30/10	$33,829	Central (Cook Inlet)
45620	KRSA: Soldotna Classic Fishwalk Access Improvements	2005	This project involves the repair, deconstruction, and reconstruction of the Soldotna angler access gratewalk/fishwalk near the Soldotna Welcome Center, City of Soldotna, protecting fish habitat, riparian vegetation and function, and improving angler access and public safety. Also included is educational signage.	City of Soldotna	1/1/07	5/25/08	$381,703	Central (Cook Inlet)
45642	MOA: Chester Creek Aquatic Ecosystem Restoration, Westchester Lagoon to Cook Inlet - Phase 1, Part 2	2005	Improve fish passage at the Chester Creek outfall to the Knik Arm of Cook Inlet. The Chester Creek Aquatic Ecosystem Restoration Project has two phases: Phase 1 - utility relocation/partial channel construction and Phase 2 - channel restoration with a culvert installation to restore the Chester Creek channel allowing for increased fish passage.	Municipality of Anchorage (MOA)	1/15/06	5/30/08	$362,362	Central (Cook Inlet)
45646	ASLC: Restore Salmon at Resurrection Bay - Year 3	2005	The ASLC, in collaboration with MariCal, Inc., a marine technology company based in Portland, Maine, ADF&G, and Cook Inlet Aquaculture Association, propose to enhance and restore salmon runs in Resurrection Bay through a coordinated enhancement and research program involving releases of hatchery Chinook, coho, and sockeye salmon smolt. Additional research will focus on factors that affect sockeye salmon production in natural systems. Objectives are established that may result in natural production of sockeye from Bear Lake, production that was extirpated in the 1960's, and we hope will once again compliment the salmon fisheries of the area.	Alaska SeaLife Center (ASLC)	9/19/06	6/30/10	$683,520	Central (Cook Inlet)
45628	BBSRI: Alagnak River Watershed Ecological Research and Monitoring Program	2005	This project will design and implement a monitoring program to document baseline ecological conditions, identify associations between ecological features and salmon abundance, and provide the foundation needed for directed research that identifies causative factors that affect sockeye salmon abundance in the watershed. Such a program would optimally consist of a suite of projects that will contribute useful information to escapement goal and habitat management.	ADF&G, Commercial Fisheries Division	3/1/06	6/30/08	$10,076	Central (Bristol Bay)
45629	BBSRI: Characterize the distribution, run timing, and abundance of Nushagak River Chinook and sockeye salmon using radio telemetry	2005	This project will utilize radio telemetry, which is a widely used method for estimating salmon escapement and determining stock composition. This project will also utilize mark-recapture studies with radio-tagged and externally marked fish will provide a method for estimating abundance. Stock composition will be determined based on the distribution of radio tags among spawning areas; this information will be gathered through varies types of surveys.	Bristol Bay Science and Research Institute (BBSRI)	3/15/06	12/31/07	$328,874	Central (Bristol Bay)

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45632	BBSRI: A Historical Review of the Bristol Bay Sockeye Salmon Smolt Program and Field Studies in 2006	2005	This project will be performed in two phases. Phase 1 is a literature review of old smolt data collected from the Bristol Bay rivers. Phase 2 is a field study to collect age, size, structure, and run timing information on the Kvichak sockeye smolts.	ADF&G, Commercial Fisheries Division	3/15/06	12/31/08	$63,758	Central (Bristol Bay)
45423	Fish Passage Restoration Project Monitoring	2003	Identify road-stream crossing sites where upstream access to productive fish habitats is inaccessible or limited by inadequately maintained or poorly designed culverts for fish passage. Provide technical assistance and administrative support in the development of a protocol for prioritizing road-stream crossing sites for restoration.	ADF&G, Sport Fish Division	1/15/04	6/30/04	$29,455	Central (Cook Inlet)
45424	Fish Passage Restoration Project Development	2003	Provide technical support and administrative oversight for fish passage restoration projects. Reestablish access to historically occupied salmonid habitats in the Kenai Peninsula, reduce sediment delivery within associated streams, improve aquatic habitat quality, and develop a monitoring protocol to track project performance.	ADF&G, Sport Fish Division	7/1/04	6/30/08	$360,592	Central (Cook Inlet)
45426	Fish Passage Improvement - Slikok Creek	2003	This project will reestablish free and efficient access to 10.49 miles of historically occupied salmonid habitats in Slikok Creek, reduce sediment delivery within associated streams, and improve aquatic habitat quality.	ADF&G, Sport Fish Division	3/1/06	12/31/07	$238,342	Central (Cook Inlet)
45427	Bean Creek Fish Passage Restoration	2003	This project includes the engineering design and removal of a culvert barrier in Bean Creek that impedes upstream movements of juvenile salmon, thus restricting access to important and productive fish habitat. Project will replace a barrier culvert with a fish-friendly culvert. Project site will be re-vegetated to stabilize the disturbed streambanks and prevent erosion and adverse effects to stream water quality.	ADF&G, Sport Fish Division	7/24/06	5/31/08	$12,509	Central (Cook Inlet)
45428	Fish Passage Improvement - Mink Creek	2003	This project replaces a perched culvert in the Mink Creek drainage within the Kenai National Wildlife Refuge on the Kenai Peninsula. PAD 21B-16 Road crosses Mink Creek, approximately 0.5 miles upstream of the stream's confluence with the Swanson River, an important sport fishery and a primary component of the Cook Inlet commercial salmon fishery.	ADF&G, Sport Fish Division	7/23/07	6/30/08	$56,238	Central (Cook Inlet)
45429	Fish Passage Improvement - Doghouse and Swan Creeks	2003	This project replaces a perched culvert in the Doghouse Creek drainage within the Kenai National Wildlife Refuge on the Kenai Peninsula and reinstalls a perched culvert on Swan Creek in the same area.	ADF&G, Sport Fish Division	7/23/07	6/30/08	$97,750	Central (Cook Inlet)
45459	CIAA: Salmon Enhancement Project - Part 1	2003	Increase salmon production (42,700,000 pinks; 13,800,000 sockeye; and 400,000 coho), raceway improvements at Trail Lakes Hatchery, preliminary assessment of cooperative enhancement efforts with Port Graham, adult salmon population monitoring activities, smolt evaluation at Big Lake, and update the Cook Inlet Regional Salmon Enhancement Plan for 2005-2025.	Cook Inlet Aquaculture Association (CIAA)	5/5/04	12/31/06	$990,000	Central (Cook Inlet)
45466	MOA: Ship Creek Fish Passage - Phase 1	2003	Enhance fish passage in Ship Creek by removing an existing embankment, restoring the channel to its natural morphology, and building a bridge to replace the road crossing. Current road crossing is supported by three collapsing arch culverts.	Municipality of Anchorage (MOA)	9/1/04	12/31/06	$1,792,200	Central (Cook Inlet)
45508	MOA: Anchorage Creeks - Community Development Manager	2004	Staff a position responsible for oversight, coordination, and outreach regarding the PCSRF earmarked for the MOA. A part-time administrative position will be staffed to provide support and serve as a liaison with the Project Management and Engineering Department.	Municipality of Anchorage (MOA)	10/1/05	6/30/09	$595,259	Central (Cook Inlet)
45530	KRSA: Kenai River Educational Radio Transmitter	2004	The objective of this project is to distribute real time fisheries information to the public through the use of low wattage AM radio recorded message transmitters. Maintaining an informed angling public is vital to the success of fisheries management.	ADF&G, Sport Fish Division	5/15/07	10/31/08	$1,547	Central (Cook Inlet)
45531	KRSA: Fishwalk Access - Phase 2	2004	This Phase 2 project involves the construction of a portion of the angler access designed to protect fish habitat, riparian vegetation, and function near the City of Soldotna Visitor Center, improving angler access and public safety. This new project will construct 87 linear feet of elevated walkway of 5' width to link Phase 1 (AKSSF project 45620) construction of ADA access along the river to an ADA accessible gravel trail.	City of Soldotna	4/1/08	6/30/08	$40,170	Central (Cook Inlet)
45532	KRSA: Soldotna Classic Fishwalk - Stairs	2004	This project will enable the purchase, refabrication and relocation of a set of access stairs under the Sterling Highway Bridge. The slope which currently leads uphill from the under bridge path's upstream terminus is a grass slope of freshly-laid sod. While not presently a designated access way to the under-bridge project, within only hours of the sod being laid, anglers began using it as a through-way to access the businesses adjacent to the bridge instead of crossing the Sterling Highway. Specifically, the stairs will lead down a 50 vertical foot, approximately 45 degree slope to the under bridge path terminus. *This project continues work begun in AKSSF projects 45620 and 45531.*	City of Soldotna, Parks and Recreation	5/1/05	3/31/09	$45,584	Central (Cook Inlet)

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FFY 2000-2010

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45536	ASLC: Restore Salmon Runs in Resurrection Bay at Alaska SeaLife Center - Year 2	2004	Restore salmon runs in Resurrection Bay through a coordinated program involving releases of naturally produced and hatchery-origin Chinook, coho, and sockeye salmon smolt	Alaska SeaLife Center (ASLC)	1/1/05	6/30/09	$1,476,795	Central (Cook Inlet)
45548	CIAA: Salmon Enhancement Project - Part 2	2004	Project objectives include stocking juvenile salmon to produce adult salmon; cooperative enhancement efforts between Port Graham Hatchery, Eklutna Hatchery, and Tutka Bay Lagoon Hatchery to strengthen and/or develop sockeye salmon runs by collecting and incubating eggs and/or releasing sockeye salmon; conducting adult salmon population monitoring; continued involvement in Big Lake Enhancement Project through gamete collection, incubation, and fry release; continued work with the Kenai Watershed Forum to identify and implement small stream habitat projects; and maintaining and upgrading the productive ability of Trail Lakes Hatchery	Cook Inlet Aquaculture Association (CIAA)	6/1/05	12/31/07	$984,530	Central (Cook Inlet)
45568	KRSA: Reconstruction of Upper Russian River Sockeye Late Run	2004	Harvested sockeye salmon will be sampled from the mixed-stock commercial, personal use, and sport fisheries. The axillary process will be excised from each sampled fish. Axillary process samples from the various fisheries and other projects will be sent to the ADF&G, Division of Commercial Fisheries Gene Conservation Lab in Anchorage for single nucleotide polyphism analysis. The analysis will estimate the probability of whether the fish is of Upper Russian River or some other Kenai River sub-stock origin by comparing its DNA with a baseline DNA database developed from fish sampled from a large number of Kenai River sub-stocks.	ADF&G, Sport Fish Division	2/16/06	5/1/09	$255,976	Central (Cook Inlet)
45569	KRSA: Russian River Bank Protection and Rehabilitation Project	2004	This project will reestablish bank vegetation for better riparian function, Chinook and coho salmon habitat, and bank stabilization. The new vegetation will be protected with the construction of interpretive/ educational signage, angler access stairways and fencing.	ADF&G, Sport Fish Division	2/16/06	3/31/09	$440,774	Central (Cook Inlet)
45570	KRSA: Russian River Ferry Crossing	2004	This project will rehabilitate angler-induced impacted fish habitat at the Russian River Ferry Crossing using bio engineered techniques, including: brush layering and live rooted and cut vegetation plantings; sustain stream bank vegetation, fish habitat, and riparian function by installing protective fencing and angler access stairways; restrict angler access along the Russian River Ferry Crossing riverbank that is negatively impacting riparian vegetation and function, fish habitat, and bank; educate the angling and general public of the importance of fish habitat and reducing damage to the riverbank using educational and interpretive signage; and enhance angler access to the Russian River Ferry Crossing riverbank that will improve bank protection, riparian function, and public safety	ADF&G, Sport Fish Division	1/17/07	10/31/07	$191,035	Central (Cook Inlet)
45641	MOA: Chester Creek Aquatic Restoration - Phase 2, Part II	2005	Project activity includes the final design and construction of an open inter-tidal channel at the mouth of Chester Creek. Project will create a channel that will be approximately 1,550 feet long, hydraulically suited for salmonid species, and will simulate a natural channel. The channel will also include a spillway (weir) to maintain a constant water level in the lagoon. This work will likely require modifications of up to 190 feet of existing bike trail and construction of public education and interpretation displays.	Municipality of Anchorage (MOA)	8/30/06	6/30/09	$2,491,947	Central (Cook Inlet)
45643	MOA: Campbell Creek Fish Habitat Rehabilitation	2005	This project will provide funds to reestablish bank vegetation for better riparian function, fish habitat, and bank stabilization at four sites: Wickersham site, Totem Plaza site, Piper Street site, and Bancroft Park site; educate agency staff, contractors, and private consultants by conducting a two-day restoration workshop at the Bancroft Park site on Campbell Creek; and identify additional restoration projects opportunities on Campbell Creek for future restoration efforts.	Municipality of Anchorage (MOA)	1/15/07	3/31/10	$193,063	Central (Cook Inlet)
45644	MOA: Ship Creek Restoration and Access Project, Schedule C - Part 3	2005	The MOA proposes to stabilize selected creek banks, prevent bank trampling, and direct fishing access from the new MOA Bridge near Ship Creek Point to the vicinity of the Knik Arm Power Plant Dam.	Municipality of Anchorage (MOA)	10/1/07	6/30/10	$41,856	Central (Cook Inlet)
45681	Kenai River Sportfishing Association (KRSA): Kenai River DIDSON Sonar Evaluation	2005	This study will evaluate whether the use of high-resolution, long-range DIDSON sonar will allow better classification of fish targets to species in the Kenai River, and improve the precision and accuracy of estimates of Chinook salmon abundance.	ADF&G, Sport Fish Division	2/1/07	6/1/08	$31,993	Central (Cook Inlet)
45682	KRSA: Additions to Anadromous Stream Catalog	2005	Using the recently completed wetland map developed by the Kenai Watershed Forum in conjunction with the Kenai River Center, we will evaluate streams that are hydrologically connected to the Kenai River and judged likely to have juvenile salmonids, but are currently unmapped in the state's anadromous catalog. We will live-trap juvenile fish in 40 streams/wetlands identified as having a high probability of supporting juvenile salmonids. We will also correct the location of streams where they are mapped in the wrong location.	Kenai Peninsula Economic Development District (KPEDD)	8/1/07	3/31/08	$15,335	Central (Cook Inlet)

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FFY 2000-2010

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45683	KRSA: Evaluation of Kenai River Streambank Restoration	2005	As many as seven miles of streambank on the Kenai River have been treated by various restoration techniques since 1995. These projects are designed to improve shoreline aquatic habitat and to control bank erosion. This project will evaluate the effectiveness of fish habitat restoration projects on the Kenai River, and will provide information that can be used to develop guidelines and criteria for identifying and implementing beneficial habitat projects.	Inter-Fluve, Inc.	3/11/08	3/31/10	$128,344	Central (Cook Inlet)
45684	KRSA: Soldotna Fishwalk - Ph. 4	2005	This Phase 4 project will refabricate and install stair materials funded by AKSSF project #45532 on the upstream side of the Kenai River bridge, construct and install an approximately 12 tread aluminum stair unit connecting to the under bridge trail, and construct and install approximately 30 feet of elevated light penetrating gratewalk.	City of Soldotna, Parks and Recreation	5/30/09	4/30/10	$61,944	Central (Cook Inlet)
45697	MOA: Fish Passage Barrier Analysis, Ship, Chester, and Campbell Creeks - Part B	2005	The MOA, in partnership with ADF&G, will utilize FishXing, a hydraulic model, to examine fish passage conditions at approximately 56 culverts previously identified within the Ship, Chester, and Campbell Creek watersheds. Existing information is inadequate to determine if the identified culverts are able to pass fish. This information will be used to help the City and its program partners prioritize culverts for additional fish passage improvement project work. This work will be jointly implemented by the MOA with AKSSF project 45645 (Part A) and the ADF&G with AKSSF project 45697 (Part B).	Municipality of Anchorage (MOA)	4/21/08	3/31/09	$81,577	Central (Cook Inlet)
45698	MOA: Campbell Creek Fish Habitat Rehabilitation - Phase 2, Part B	2005	This project funds ADF&G habitat and streambank restoration staff to: 1) consult on the streambank restoration projects managed by the MOA under AKSSF project numbers 45643 and 45779 (Part A), and 2) conduct a 2-day workshop in the Anchorage area to teach proper restoration techniques and their appropriate application.	ADF&G, Sport Fish Division	2/15/08	06/30/09	$10,100	Central (Cook Inlet)
45699	MOA: Campbell Creek Gaging Station	2005	This project will employ a continuously recording gaging station on Little Campbell Creek (LCC) to obtain stream flow records for the next two years. The data collected will augment previous years gaging data from the same location.	Municipality of Anchorage (MOA)	3/15/08	05/31/10	$60,096	Central (Cook Inlet)
45778	MOA: Little Campbell Fish Passage Improvement	2006	This project removes upstream migration barriers and improves fish passage conditions resulting from improperly designed and/or installed culverts at selected stream/road crossings in the Little Campbell Creek watershed in Anchorage, AK. Little Campbell Creek is an important tributary (sub-watershed) to the larger Campbell Creek watershed.	Municipality of Anchorage (MOA)	9/1/07	3/31/11	$1,739,222	Central (Cook Inlet)
45779	MOA: Campbell Creek Fish Habitat Rehabilitation - Phase 2, Part A	2006	This project will reestablish bank vegetation for better riparian function, fish habitat and bank stabilization at multiple sites along Campbell Creek. The restoration projects proposed are priorities of the Anchorage Watershed Task Force. The projects were selected from a list of approximately fifteen restoration opportunities identified in a Campbell Creek restoration assessment prepared under AKSSF project 45643 and have been reviewed by ADF&G habitat restoration staff. Part B of the restoration will be funded with AKSSF project 45698.	Municipality of Anchorage (MOA)	2/15/08	06/30/10	$305,657	Central (Cook Inlet)
45786	CIAA: Salmon Enhancement Project - Part 4	2006	The CIAA Salmon Enhancement Project - Part 4 will: 1) provide juvenile sockeye and coho salmon for stocking to supplement future Cook Inlet (Area H) adult salmon returns; 2) enumerate the escapement and assess the population size of sockeye and coho salmon in selected streams of the Cook Inlet drainage where current estimates are lacking or unavailable; and 3) replace the deteriorating ADF&G-owned and CIAA-operated Bear Creek weir building and remodel fish handling equipment at the Bear Creek weir site to improve the evaluation of salmon enhancement activities and provide a safe environment for educating local students and the public on the salmon resource.	Cook Inlet Aquaculture Association (CIAA)	6/1/07	6/30/09	$789,701	Central (Cook Inlet)
45787	CIAA: Salmon Enhancement Project - Fish Ladder	2006	The Paint River fish ladder, constructed in the early 1990s but never operated, provides access to salmon spawning and rearing habitat in the Paint River drainage in Lower Cook Inlet. CIAA will complete two improvements to the CIAA-owned Paint River fish ladder. To reduce potential bear problems associated with the operation of the ladder, the fish exit pool at the top of the fish ladder will be expanded and the open cells on the lower end of the ladder will be covered. Other needed maintenance work will also be completed. This project will complete construction of the Paint River fish ladder.	Cook Inlet Aquaculture Association (CIAA)	2/22/08	06/30/10	$170,000	Central (Cook Inlet)
45788	AVI: Port Lions Habitat Protection	2006	This project will protect salmon habitat and decrease the trail's negative effect on the surrounding watershed by establishing an engineered bridge crossing, hardening the trail surface at bridge approaches, and directing trail surface water runoff away from the stream.	Alaska Village Initiatives (AVI)	7/15/09	06/30/10	$111,460	Central (Cook Inlet)

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FFY 2000-2010

Current to September, 2011

Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45907	Kvichak Sockeye Smolt Study	2008	This project will test a comprehensive acoustic and net sampling program by deploying it to enumerate and sample smolt in the Kvichak River during the spring of 2009, 2010, and 2011, providing estimates of the number, age, and size of sockeye salmon smolt migrating to sea from the Kvichak River system. Age and size information will be collected from sockeye salmon smolt captured near the counting site with fyke nets or traps.	ADF&G, Commercial Fisheries Division and Bristol Bay Science and Research Institute	5/1/09	6/30/12	$230,115	Central (Bristol Bay)
45910	Bristol Bay Fishery Selection	2008	This project will fund 1) the assembly of commercial and recreational fishery catch and escapement data into an Access database and 2) the development of standardized models that use these data to evaluate the catch and escapement fish size and age distributions and to quantify fishery selection. Specifically, this project will focus on Kvichak district sockeye, a "Stock of Concern," and Nushagak River Chinook, which have high commercial and recreational value and which have experienced stock declines.	University of Washington, School of Aquatic & Fishery Sciences (UW - SAFS) and ADF&G, Commercial Fisheries Division	7/1/09	12/31/11	$98,319	Central (Bristol Bay)
45921	Susitna River Coho and Chum Abundance	2008	This project will 1) estimate the inriver abundance of coho and chum salmon in the Susitna River annually for three years using capture-recapture methods; 2) better define the stock composition of the Susitna River coho and chum salmon runs; 3) place historical stock assessment data into a drainage-wide context; and 4) help design future stock assessment projects that are more efficient and effective.	ADF&G, Sport Fish Division	10/27/09	3/31/13	$1,429,792	Central (Cook Inlet)
45631	BBSRI: Genetic Stock Identification Research for Bristol Bay Sockeye Salmon	2005	Characterize the Bristol Bay sockeye salmon baseline using single nucleotide polymorphism techniques. Collection and analysis of sockeye salmon tissues collected in the Port Moller test fishery and the inshore fishing districts of Bristol Bay.	ADF&G, Commercial Fisheries Division	3/15/06	12/31/07	$283,167	Central (Bristol Bay)
45679	AFDF: Bristol Bay Salmon Quality Tracking Pilot Study	2005	AFDF will contract with Digital Observer, Inc. to conduct a pilot study employing a tagging and tracking system that allows processors to track salmon back through the supply chain to the harvesters.	Alaska Fisheries Development Foundation (AFDF)	5/1/08	12/31/08	$28,518	Central (Bristol Bay)
45858	Catch Composition in Bristol Bay	2007	Investigators will use DNA data to determine the historical stock composition of sockeye salmon caught in the Egegik, Ugashik, Nushagak, Togiak, and Naknek-Kvichak Districts of Bristol Bay to produce improved brood tables that will provide improved pre-season forecasting, improved inseason forecasting, and improved escapement goals.	University of Washington, School of Aquatic and Fisheries Sciences (UW, SAFS)	7/1/08	6/30/10	$324,694	Central (Bristol Bay)
45862	Nushagak Chinook Productivity	2007	This project will reconstruct indices of Nushagak (Bristol Bay) Chinook salmon growth during each year in freshwater and marine habitats, 1971-2007. The project addresses the need to examine productivity of Chinook salmon in relation to growth and selectivity of gillnets and contributes to the development of a comprehensive stock assessment of Bristol Bay Chinook salmon.	Natural Resources Consultants, Inc. (NRC)	7/1/08	1/31/11	$110,735	Central (Bristol Bay)
45877	Port Moller Salmon Test Fishery	2007	This project sets out a research program to develop more representative (i.e., random) sampling gear at Port Moller and will involve fishing alternate gillnet gear for three seasons in addition to fishing the historical test gillnet. A sampling program with less selectivity with respect to fish body size will improve the accuracy and precision of age and stock composition estimates from the test fishery and ultimately improve the ability of the test fishery to index abundance.	Bristol Bay Science and Research Institute (BBSRI)	5/1/09	12/31/11	$431,735	Central (Bristol Bay)
45882	Egegik Catch Genetics ID	2007	This project will provide postseason estimates of the stock composition of sockeye salmon samples designed to test the efficacy of changing variables under management control within the Egegik commercial fishing district. Using a targeted test fishery, fish samples will be collected under varying conditions and locations (e.g., tidal stages, temporal strata, district boundaries, etc.) to better understand and manage mixed stock commercial fisheries. Stock compositions will be identified using the existing sockeye salmon genetic baselines and descriptive markers.	ADF&G, Commercial Fisheries Division	6/1/09	6/1/12	$222,171	Central (Bristol Bay)
45914	Bristol Bay Sockeye Productivity	2008	This project will test the hypotheses that survival at sea of Bristol Bay sockeye salmon is dependent on growth in freshwater and that growth in freshwater is linked to biological factors (parent abundance, previous-year abundance) and environmental factors (temperature, precipitation). The study will utilize previously-measured adult sockeye salmon scales which will be used to back-calculate length-at-age of juvenile salmon from each major watershed when they migrated from fresh to marine waters. The growth database will encompass major climate events and will allow hypotheses about growth and survival in response to these events to be tested.	Natural Resources Consultants, Inc. (NRC) and ADF&G, Commercial Fisheries Division	7/1/09	12/31/12	$156,294	Central (Bristol Bay)

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FFY 2000-2010

Current to September, 2011

Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45915	Improve Salmon Forecast Accuracy	2008	The goal of this project is to improve Bristol Bay forecasts by incorporating new scientific information on competition between Asian pink salmon and Bristol Bay sockeye salmon by comparing forecast error during odd- versus even-numbered years by age group in each of the eight watersheds of Bristol Bay, 1967-2008. These findings will be used to test and incorporate the pink salmon effect into current forecast models for development of the forecast in 2010.	Natural Resources Consultants, Inc. (NRC) and ADF&G, Commercial Fisheries Division	7/1/09	3/30/11	$41,866	Central (Bristol Bay)
45916	Nushagak Chinook Genetics Baseline	2008	This project will fund the collection and analysis of genetics samples from Chinook salmon spawning in the Nushagak watershed.	ADF&G, Commercial Fisheries Division	7/1/09	6/30/11	$115,112	Central (Bristol Bay)
45885	Mat-Su Basin AWC	2007	This project will contribute salmon data to the Catalog of Waters Important for Spawning, Rearing, or Migration of Anadromous Fishes – Central Region (AWC) for the Matanuska and Susitna Rivers and their tributaries. Data from this project that leads to increased documentation of anadromous waters will provide additional salmon habitat protections.	US Fish and Wildlife Service (USFWS) Anchorage Fish and Wildlife Field Office	7/1/09	12/31/09	$69,760	Central (Cook Inlet)
45886	Central Cost Share Program	2007	The Central Cost Share Project is a proactive financial incentive and educational outreach program that provides funding and technical project design assistance for public and private landowners to sustain and enhance valuable salmon habitat in the Central region (excluding the Mat-Su River Basin). ADF&G will partner with USFWS and conduct a restoration program to rehabilitate and sustain fish habitat in watersheds of Central Alaska over a two year period. This project continues and expands on work begun in AKSSF project #45522.	ADF&G, Sport Fish Division	7/1/09	12/31/11	$270,818	Central (Cook Inlet)
45355	MOA: Ship Creek Restoration and Access Project, Schedule C - Part 1	2003	The MOA proposes to stabilize selected creek banks, prevent bank trampling, and direct fishing access from the new MOA Bridge near Ship Creek Point to the vicinity of the Knik Arm Power Plant Dam.	Municipality of Anchorage (MOA)	10/1/07	6/30/08	$187,566	Central (Cook Inlet)
45362	Beaver Creek Fish Passage Improvement	2003	This project will improve fish passage for juvenile salmonids at the Bald Mountain Road crossing by replacing the existing perched culvert with a larger, properly installed culvert.	ADF&G, Sport Fish Division	4/17/08	6/30/08	$39,246	Central (Cook Inlet)
45366	Hidden Creek Headwall	2003	This project will purchase the concrete headwall that will be installed at the inlet of a new 17.4-foot wide multi-plate pipe-arch culvert. The headwall was determined to be necessary by DOT engineers to support and stabilize the new larger culvert. The headwall structure will be installed (with separate funding) by Alaska Dept. of Transportation/Public Facilities (ADOT) as part of the existing Hidden Creek Fish Passage Improvement project, AKSSF project #45430.	ADF&G, Sport Fish Division	4/27/08	6/30/08	$11,021	Central (Cook Inlet)
45417	Anchorage Hatchery Upgrades	2003	Mitigate for loss of heat at the Fort Richardson Hatchery through the design and installation of a supplemental heating system. A qualified engineering firm will be engaged to conduct a full study of the Fort Richardson/Elmendorf Hatchery program as well as a possible new Fairbanks hatchery, and to develop facility design options.	ADF&G, Sport Fish Division	7/1/03	12/31/04	$966,422	Central (Cook Inlet)
45425	Kenai Peninsula Dam Evaluation	2003	Identify dams on the Kenai Peninsula that inhibit access to potentially productive upstream habitat. Develop a process for evaluating and prioritizing for fish passage restoration. Provide written report with recommendations for future restoration projects and database.	Kenai Peninsula Economic Development Corporation	3/1/05	12/31/05	$49,727	Central (Cook Inlet)
45430	Hidden Creek Fish Passage Improvements	2003	The project will remove the existing perched culvert and install a new 17.4-foot wide multi-plate pipe-arch culvert, 85 feet in length, utilizing a modified stream simulation design. Project area stream banks and the road prism will be stabilized and re-vegetated where necessary. The original culvert will be retained during excavation and installation of the new culvert. The new structure will be installed by Alaska Dept. of Transportation/Public Facilities (ADOT) at approximately the same location but a short distance to the west in a manner that will be aligned to allow for a more direct entry into the culvert for fish migrating upstream.	ADF&G, Sport Fish Division	4/24/08	6/30/08	$53,590	Central (Cook Inlet)
45438	ASLC: New Technologies for Increasing Smolt Survival in Pacific Salmon - Year 1	2003	ASLC, in collaboration with MariCal, Inc. of Portland, Maine, ADF&G, and Cook Inlet Aquaculture Association, proposes to rear and release 275,000 coho smolt from the ASLC into Resurrection Bay. The specific objective is to evaluate the potential for new technology developed by MariCal, Inc. to increase ocean survival and adult returns of coho and Chinook salmon.	Alaska SeaLife Center (ASLC)	3/8/04	12/31/06	$990,000	Central (Cook Inlet)
45525	KRSA: Instream Flow Protection for the Middle Kenai River	2004	The ADF&G, Division of Sport Fish/ Research and Technical Services staff, in partnership with the Alaska Department of Natural Resources, Water Resources Section staff, will collaborate to gather and compile necessary hydrologic and biologic data to prepare and file an instream flow reservation application to complete the middle Kenai River for instream flow water rights under AS 46.15.145. This instream flow reservation is intended to protect and maintain fish production within the Kenai River.	ADF&G, Sport Fish Division	2/16/06	9/15/06	$7,041	Central (Cook Inlet)

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FFY 2000-2010

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45571	KRSA: Kenai River Smolt Abundance - Phase 1	2004	This project will provide annual estimates of the abundance of sockeye salmon smolts emigrating from the Kenai River. Mark-recapture methods will be used to estimate the population size of sockeye salmon smolts emigrating from the Kenai River watershed using the Russian River stock as a genetic mark. Annual sockeye salmon smolt population estimates will be used to build life-history brood tables needed to improve forecasts, evaluate escapement goals, and examine effects of ocean conditions on stock productivity.	ADF&G, Commercial Fisheries Division	4/16/08	6/30/08	$108,569	Central (Cook Inlet)
45050	AFDF: Salmon Offal Peat Composting Study	2005	This project will improve a process whereby naturally-composting salmon offal is converted into environmentally-friendly high and consistent quality salmon peat organic compost and leachate.	Alaska Fisheries Development Foundation (AFDF)	6/1/08	6/30/09	$34,602	Central (Cook Inlet)
45608	CIAA: Salmon Enhancement Project - Part 3	2005	Continue cooperative enhancement efforts between Port Graham Hatchery, Eklutna Hatchery, and Tutka Bay Lagoon Hatchery to strengthen and/or develop sockeye salmon runs. Conduct adult salmon population monitoring. Continue work with Kenai Watershed Forum to identify and implement small stream habitat projects.	Cook Inlet Aquaculture Association (CIAA)	6/1/06	6/30/09	$979,847	Central (Cook Inlet)
45617	KRSA: Kenai River Salmon Stock Delineation	2005	This project will study salmon stock identification and fish movement in freshwaters of the Kenai River drainage. Elemental composition of otoliths will be used to determine the composition of the ambient water. Multi-elemental analysis of otoliths will be used to identify stream of origin, habitat associations, and discriminate stocks and sub-stocks of fish. We will analyze trace element signatures, Sr/Ca, Ba/Ca, and Mg/Ca, to delineate stocks and sub-stocks to natal streams.	University of Alaska Fairbanks (UAF)	4/1/07	4/30/08	$82,949	Central (Cook Inlet)
45630	ASLC: Educational Display that Demonstrates the Complex Natural History of Salmon	2005	This project will fund the development of an educational display that demonstrates the complex natural history of salmon in AK. This display/exhibit will educate people about the natural history of Alaskan salmon. The display/exhibit will begin in our southern upstairs gallery immediately after the guests see Steller sea lions, seals, and eiders, and have the opportunity to learn about and interact with coldwater marine organisms.	Alaska SeaLife Center (ASLC)	3/15/06	3/31/08	$468,652	Central (Cook Inlet)
45638	ASLC: Education and Outreach - Restore Salmon at Resurrection Bay	2005	This project will educate Alaskans about the importance of protecting and restoring salmon habitats and maintaining salmon management systems to regulate human activities that affect salmon. The education portion of the project will provide four program delivery venues: one option is to deliver programs on-site at the Alaska SeaLife Center; a second option is to deliver programs using distance learning technology; a third option is for an ASLC outreach educator to deliver programs in Alaska communities; and the fourth option is to provide educational content and materials on the internet for broad distribution.	Alaska SeaLife Center (ASLC)	8/15/06	3/31/10	$272,035	Central (Cook Inlet)
45140	KRSA: Soldotna Classic Fishwalk - Phase 3	2006	This Phase 3 project will construct an elevated walkway to provide angler access across a wet boggy area, improving public safety and protecting the fragile fish habitat and riparian vegetation. The project is located immediately downstream of the Soldotna bridge near the City of Soldotna Visitor Center. This project installs approximately 30 linear feet of 5' wide elevated walkway linking two trails; the under-bridge (non-ADA gravel) trail, and the ADA elevated walkway trail. This project continues the work of AKSSF projects 45620 and 45140 (700).	City of Soldotna	4/17/08	6/30/08	$16,995	Central (Cook Inlet)
45141	KRSA: Kenai River Smolt Abundance - Phase 2	2006	A mark-recapture experiment will be conducted cooperatively between ADF&G Commercial Fisheries and Sport Fish Divisions, and Cook Inlet Aquaculture Association (CIAA), to estimate passage (abundance) of Kenai River sockeye salmon at river kilometer (rkm) 31.4 using weirs at Hidden Creek and Russian River as recapture sites. The mark-recapture abundance estimate will be used to evaluate the accuracy of sonar estimates of sockeye salmon passage (abundance) at rkm 31.4. *This Phase II project continues work begun in AKSSF project #45529.*	ADF&G, Commercial Fisheries Division	7/1/08	11/1/09	$76,008	Central (Cook Inlet)
45142	KRSA: Kenai River Watershed Assessment	2006	KWF will conduct a detailed watershed characterization of the Kenai River and 25 tributary watersheds as small as 5,400 acres. These tributary watersheds cover the extent of the Kenai River drainage ranging from No Name Creek near the mouth to the Snow River at the headwaters (Figure 1). This analysis, using a Geographic Information System (GIS), will summarize the existing conditions, including land uses and natural disturbances of these watersheds, and isolate areas that may be posing a threat to Kenai River salmonid habitat and fisheries.	Kenai Watershed Forum (KWF)	5/15/08	3/31/11	$71,185	Central (Cook Inlet)

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FFY 2000-2010

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45143	KRSA: Kenai River Chinook Salmon GSI	2006	ADF&G will collect stock composition information from returning Kenai River Chinook salmon and from Chinook salmon harvested in the sport fishery. Chinook salmon will be captured in the lower Kenai River to estimate stock composition and determine overlap in the return timing of tributary and mainstem spawning fish. Chinook salmon harvested in the sport fishery will be sampled to estimate the sport harvest stock composition.	ADF&G, Sport Fish Division	6/4/08	3/31/11	$163,534	Central (Cook Inlet)
45144	KRSA: Kenai River Smolt Abundance - Phase 2	2006	Mark-recapture methods will be used to estimate the population size of sockeye salmon smolts emigrating from the Kenai River watershed using the Russian River stock as a genetic mark. Smolt sampling will occur from May through June each year. The size and age composition of Russian and Kenai River sockeye salmon smolts will also be estimated from samples collected each week. *This project continues work begun in AKSSF project #45571.*	ADF&G, Commercial Fisheries Division	7/1/08	2/28/10	$231,414	Central (Cook Inlet)
45145	KRSA: Dave's Creek Habitat Restoration	2006	Tern Lake and Dave's Creek are key spawning and rearing areas on public land in the Kenai River watershed. This project will improve stream habitat in an adversely affected section of stream for all five species of salmon (coho, pink, sockeye, chum, and Chinook) as well as Dolly Varden char and rainbow trout. Fish habitat restoration in Dave's Creek will be accomplished by redesigning the stream channel away from the highway fil slope. This stream will be improved by decreasing channel gradient, increasing pool habitat and complexity, and enhancing flood plain access leading to an additional 30% in fish habitat availability in the impacted reach.	US Forest Service	4/14/09	6/30/10	$175,014	Central (Cook Inlet)
45741	ASLC: Salmon Exhibit Tank Inserts	2006	This project will fund design, construction, and installation of a more realistic and educationally rich salmon exhibit for ASLC visitors through the addition of lifelike molded habitat and rock structures (tank inserts) to the existing display funded with AKSSF project 45630.	Alaska SeaLife Center (ASLC)	1/1/07	12/31/07	$92,700	Central (Cook Inlet)
45742	ASLC: Resurrection Bay Salmon Restoration, Enhancement, and Research - Year 4	2006	This project will work to enhance and/or restore Chinook, coho, and sockeye salmon runs in Resurrection Bay through a coordinated program involving research, hatchery stocking, and habitat restoration of natural salmon producing systems. This project continues AKSSF projects 45536 and 45646.	Alaska SeaLife Center (ASLC)	1/4/07	6/30/11	$1,373,764	Central (Cook Inlet)
45847	Slikok Creek Critical Habitat	2007	This research project is phase one of a long-term ADF&G goal to assess adult and juvenile salmonid populations (Chinook and coho) and their critical habitat use in smaller (less than 6 meter streamwidth) tributaries of the Kenai River. This research will be for assessment of Slikok Creek. PI will use passive integrated transponders (PIT) tags to monitor adult fish movements and to identify run timing and primary stream reaches utilized for spawning. For juvenile fish, PI will monitor seasonal movements to identify critical rearing habitat locations by stream reach.	ADF&G, Sport Fish Division	4/4/08	4/30/11	$175,928	Central (Cook Inlet)
45851	DIDSON-Based Chinook Assessment	2007	This project will implement a new imaging sonar technology for providing escapement estimates of Chinook salmon in the Kenai River. This project builds on previous investigations which have shown that fish size estimates derived from DIDSON images provide a more accurate means of estimating Chinook salmon passage than the split-beam technology that is currently used. Good fish size estimates are critical for distinguishing Chinook from the more numerous sockeye salmon. More accurate estimates of Chinook salmon abundance will benefit inseason management and the setting of escapement goals.	ADF&G, Sport Fish Division	5/7/08	6/30/11	$200,552	Central (Cook Inlet)
45853	Salmon Rearing Habitat Restoration	2007	The Little Campbell Creek (LCC) Salmon Rearing Habitat Restoration project will restore channel habitat and remove one of the highest priority fish passage barriers (aka D & S Concrete site) in lower LCC. This barrier severely limits juvenile salmon access (primarily coho) and hinders adult salmon migration to approximately 50% of the LCC watershed. The previous culvert will be replaced with a pre-cast concrete culvert that provides for maintenance access and ability to maintain fish passage through the culvert.	Municipality of Anchorage (MOA)	5/19/08	5/31/11	$805,059	Central (Cook Inlet)
45855	Mat-Su Fish Habitat Restoration Workshop	2007	This project will use a two-day Restoration Workshop to deliver essential fish life cycle and habitat educational information, a fish habitat restoration curriculum, and bio-technical restoration technique information to the Mat-Su Borough staff, state and federal agencies, municipalities, watershed groups, non-profit organizations, conservation groups, contractors, and private consultants.	ADF&G, Sport Fish Division	5/29/08	10/31/08	$12,875	Central (Cook Inlet)
45856	Mat-Su Valley Restoration Cost Share	2007	The Mat-Su Valley Restoration Cost Share Project is a proactive financial incentive and educational outreach program that provides funding and technical project design assistance for public and private landowners to sustain and enhance valuable salmon habitat in the Mat-Su River Basins. Using a restoration workshop approach, pre-application consultation, and onsite inspection, staff will educate landowners on the components of fish habitat, the value of that habitat, and provide technical restoration design and permitting assistance.	ADF&G, Sport Fish Division	5/1/08	12/31/11	$445,407	Central (Cook Inlet)

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FFY 2000-2010

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45857	Instream Flow on Stariski Creek	2007	In cooperation with ADF&G, Cook Inletkeeper will maintain a stream gage and measure flow on Stariski Creek to provide the necessary data to quantify instream flows to protect salmon habitat. Annual water quality reports will be available online at www.inletkeeper.org.	Cook Inletkeeper	7/1/08	6/30/11	$33,026	Central (Cook Inlet)
45860	Protecting Salmon From RCG	2007	This pilot study will research the containment of Reed Canary Grass (RCG) and restore salmon habitat in three key locations. To achieve containment and restoration in these infested areas, four main steps need to be taken: 1) convene a meeting with RCG experts and local agencies to discuss appropriate removal strategies; 2) invoke mechanical containment measures through a community salmon stewardship program; 3) monitor the success of the control techniques over multiple seasons to ensure containment and/or eradication; and 4) revegetate the disturbed areas with native plants to restore salmon habitat.	Kenai Watershed Forum (KWF)	7/1/08	12/31/11	$46,458	Central (Cook Inlet)
45861	Instream Flow Technical Support	2007	The goal of this project is to obtain instream flow protection on various streams throughout Central Alaska that have existing and sufficient supporting hydrologic information.	ADF&G, Sport Fish Division	7/1/08	6/30/10	$11,962	Central (Cook Inlet)
45864	Northern Cook Inlet GSI	2007	ADF&G will collect tissue samples from primary Chinook salmon spawning locations in NCI over a three-year period. Tissue samples will be analyzed using SNP genetic markers to identify measurable genotypic diversity among stocks. The purposes of this project are three-fold: 1) to develop a baseline of tissue samples and genetic data for NCI Chinook salmon populations, 2) to determine the level of discrimination that genetic information can provide among Chinook salmon stocks in NCI, and 3) to determine whether this discrimination has useful fishery applications.	ADF&G, Sport Fish Division	7/1/08	1/31/12	$387,525	Central (Cook Inlet)
45866	Cook Inlet Sockeye GSI	2007	This project will fund the genetic analysis of samples collected from the gillnet commercial fisheries prosecuted in UCI in 2005 to 2007 that represent fishing areas and periods (fishery-time strata) for which no GSI estimates exist. Information from these analyses will also provide a better understanding of the distribution of stocks both temporally (within and among years) and spatially in the commercial catch.	ADF&G, Commercial Fisheries Division	7/1/08	12/31/09	$183,573	Central (Cook Inlet)
45867	Remote Video Escapement	2007	Beginning in FY09, autonomous video counting towers (AVCTs) will be deployed on the outlet creeks of four lakes in Lower Cook Inlet (Delight, Desire, Mikfik, and Chenik) that support commercially-targeted wild stocks of sockeye salmon. A weir will be operated concurrently on at least one of the systems to evaluate the accuracy of video counts. This project will allow us to fund the additional equipment and staff needed to annually operate these projects. Operating AVCTs on these four streams for three years will enhance inseason fisheries management capabilities and further demonstrate the accuracy and reliability of this relatively new technology.	ADF&G, Commercial Fisheries Division	7/1/08	10/31/11	$255,804	Central (Cook Inlet)
45868	Mat-Su Instream Flow Protection - Year 1	2007	The goal of this project is to collect the hydrological data necessary to protect instream flows in at least three waters identified for their importance to the production of salmon in the Mat-Su Basin.	ADF&G, Sport Fish Division	7/1/08	9/30/09	$94,652	Central (Cook Inlet)
45870	Wetland Stream Habitats	2007	This project evaluates the relative importance of small wetland streams as juvenile salmon rearing and overwintering habitat. Comparisons of juvenile salmon catch rates, fitness and stream characteristics between six small upland and six small wetland stream systems will be used to estimate the relative importance of these two stream types as juvenile salmonid rearing habitat.	Aquatic Restoration and Research Institute (ARRI)	7/1/08	9/30/10	$171,902	Central (Cook Inlet)
45872	Sediment Transport - Lower Ship Creek	2007	A three-dimensional flow and sediment transport model (Environmental Fluid Dynamics Code, or EFDC, supported by the EPA) will be developed to determine whether the hydrodynamic and sediment character of Ship Creek in the vicinity of and downstream of the KAPP dam is likely to change significantly as a result of dam removal.	University of Alaska Anchorage (UAA)	7/1/08	6/30/11	$80,785	Central (Cook Inlet)
45873	Mat-Su Fish Passage Restoration	2007	The Mat-Su Fish Passage Improvement Plan will be a collaborative multi-agency effort to prioritize the more than 130 culverts that should be replaced in the Mat-Su Basin to restore fish passage for anadromous fish. The plan will include short and long term actions, identify potential funding resources, and integrate with local, state, and railroad reconstruction and maintenance plans.	MSRDC	8/15/08	12/31/09	$257,650	Central (Cook Inlet)
45875	Fish Passage Retrofit - Duncan Drive	2007	This project addresses upstream fish passage for juvenile salmonids currently limited by deteriorating geomorphological conditions at a culvert that is perched in an unnamed tributary of the Kenai River. Replacement of the existing perched culvert with a larger culvert designed to provide natural stream conditions within the culvert environment, favorable to upstream fish movement, will dramatically improve fish passage at the crossing.	ADF&G	1/1/09	8/31/09	$56,409	Central (Cook Inlet)

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45876	Fish Passage - Kenai River Tributary	2007	This project will remove the three existing culvert barriers and install three new properly-sized culverts utilizing a stream simulation design in the summer 2009 construction period. Restoration or improvement of historic fish passage and upgrading of stream crossings associated with roads are one part of the ADF&G's efforts to maintain healthy salmonid populations and protect water quality in Alaska's watersheds. This project will reestablish free and efficient access to approximately 1.1 miles of historically occupied salmonid rearing habitats near the Kenai River and improve habitat quality for all aquatic organisms.	ADF&G, Sportfish Division	1/1/09	9/30/10	$84,428	Central (Cook Inlet)
45880	Homer Restoration Workshop & Access	2007	This project funds a two-day Restoration Workshop (Workshop) for state and federal agencies, municipalities, watershed groups, non-profit organizations, conservation groups, contractors, and private consultants. The Workshop will provide essential fish life history and habitat educational information, a fish habitat restoration curriculum, and bio-technical restoration technique information, supplementing the educational outreach necessary for the successful conduct of future restoration efforts in or near Homer. The Workshop will also restore approximately 50 of damaged riverbank and install light penetrating gratewalks and stairways.	ADF&G, Sport Fish Division	5/1/09	6/30/09	$24,031	Central (Cook Inlet)
45881	Fish Passage Restoration Coal Creek	2007	This project will contribute funds for and oversee the replacement of the existing culvert barrier in Coal Creek with a new, larger, fish-friendly culvert and to stabilize the adjacent stream channel using bio-engineering techniques. The new crossing structure will utilize a stream simulation design that will involve removal of the existing culvert and installation of a new properly sized structure.	ADF&G, Sport Fish Division	5/1/09	6/30/10	$185,099	Central (Cook Inlet)
45883	Matanuska R. Spawning Distribution	2007	This project describes the run timing, spawning distribution, and abundance of sockeye, chum, and coho salmon in the Matanuska River. The information collected will identify habitat important for sockeye, chum, and coho salmon, allowing local land managers and planners to better protect and conserve important salmon habitat from current and future development activities in the Matanuska River watershed. The project will also provide fishery managers with baseline data regarding the relative run strength and timing for all species of Pacific salmon, and spawning distribution and abundance of sockeye, chum, and coho salmon in the Matanuska River watershed.	US Fish and Wildlife Service, Anchorage Fish and Wildlife Field Office	5/1/09	3/31/12	$239,991	Central (Cook Inlet)
45888	Susitna Sockeye Escapement	2007	This project will estimate adult sockeye salmon escapement in five sockeye salmon rearing lakes with invasive northern pike (Chelatna, Shell, Lockwood, Trapper, and Red Shirt) and two without (Larson and Judd). Estimates of sockeye salmon escapement among lakes will be used to help evaluate escapement goals and potential management actions. This project will provide lake escapement estimates that will be used to help evaluate the Yentna sonar estimate. CIAA will enumerate adult escapements in each lake and collect species data and age, sex, and length (ASL) data. *This project continues work begun in AKSSF project 45608 (objective 2) which estimated sockeye salmon adult escapement and fall fry and smolt abundance in seven lakes in the Susitna River watershed (Judd, Shell, Hewitt, Chelatna, Larson, Stephan, and Byers) through June 2009.*	Cook Inlet Aquaculture Association (CIAA)	7/1/09	3/31/12	$757,795	Central (Cook Inlet)
45890	Substantiation of the AWC in SC AK	2007	This project will provide funding for ADF&G area office staff to review ADF&G records, publications, and Fish Resource Permit reports to identify data for unsubstantiated water bodies or water bodies not currently listed in the Catalog of Waters Important for the Spawning, Rearing or Migration of Anadromous Fishes and its associated Atlas (AWC). Project staff will complete and submit nominations forms which will be used to substantiate anadromous fish species presence in unsubstantiated water bodies or water bodies not currently listed in the AWC. In addition, staff from each area office will identify water bodies in their areas where anadromous fish species are known or suspected to be present but are not presently documented in the AWC and will prepare sampling plans to substantiate their presence.	ADF&G, Sport Fish Division	7/1/09	6/30/10	$27,017	Central (Cook Inlet)
45906	Salmon Habitat – Stream Temperature	2008	Stream water temperatures affect many aspects of Pacific salmon life history and, as they approach salmon tolerance values, can make fish more susceptible to disease and negatively influence survival. Recent data shows that water temperatures in many Central Alaska stream types are near or exceed tolerance values. Changes in water temperatures due to land use development or climate change could influence the abundance of Pacific salmon. A clearer understanding between migration timing, spawning habitat selection, juvenile survival, and temperatures will help interpret salmon return data and improve management and protection of Pacific salmon within Central Alaska streams.	Aquatic Restoration and Research Institute (ARRI)	5/1/09	3/31/13	$92,978	Central (Cook Inlet)

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45912	Yentna Fish Wheel Selectivity	2008	This project will estimate the species selectivity of the fish wheels used to apportion sonar counts using tagging methods previously used on the Taku River. Sockeye, pink, chum, and coho salmon will be tagged at Flathorn station 10 km downstream of the Yentna sonar site. The species selectivity of the Yentna fish wheels will be estimated from the tag recapture rate of each species in the Yentna wheels. Project results will be used to correct for species selectivity of the fish wheels, thus improving the accuracy of Yentna sockeye salmon escapement estimates.	ADF&G, Commercial Fisheries Division	7/1/09	3/31/13	$856,699	Central (Cook Inlet)
45913	Yentna Sonar Error Estimation	2008	This project will examine five error sources of estimating salmon abundance on the Yentna River using DIDSON and evaluate whether the new methods provide a more accurate sockeye salmon abundance estimate by comparing old and new estimates with aggregate upstream weir counts. The following error sources will be investigated: observer counting errors, truncating the field season, fish migrating outside the sonar beam, reduced detection of fish within the sonar beam, and uneven capture probability in the fish wheel.	ADF&G, Commercial Fisheries Division	7/1/09	3/15/13	$637,196	Central (Cook Inlet)
45917	Protecting Salmon from RCG Slikok/Kenai	2008	This project will determine current locations of Reed Canary Grass (RCG) on the Kenai Peninsula, contain the spread of this invasive species, and restore salmon habitat along portions of Slikok Creek and the Kenai River.	Kenai Watershed Forum (KWF)	7/1/09	12/31/12	$56,587	Central (Cook Inlet)
45918	Susitna Sockeye Production	2008	This project will estimate survival from potential egg deposition to fall fry, and fall fry to smolt, in 13 rearing lakes in the Susitna River with and without invasive northern pike. The relative abundance, size, and age composition of northern pike, and their consumption of juvenile salmon during the smolt migration, will be estimated in lakes where pike occur. CIAA will estimate smolt abundance and collect limnological samples in each lake. ADF&G will estimate fall fry abundance in each lake and conduct limnological laboratory analyses. The total escapement of sockeye salmon into the Susitna River will be estimated using a genetic-based mark-recapture method.	ADF&G, Commercial Fisheries Division and Cook Inlet Aquaculture Association (CIAA)	7/1/09	3/31/13	$1,731,018	Central (Cook Inlet)
45526	KRSA: Kenai Peninsula College Fish Habitat	2004	Using a variety of bank restoration and protection techniques, this project will provide improved fish habitat, riparian vegetation, riverbank stability, and reduced bank erosion. This project will also redirect angler access from the Kenai Peninsula College property to the enhanced infrastructure at the Slikok Creek Recreation Site and provide improved and safer access for the angling public.	ADF&G, Sport Fish Division	2/16/06	3/31/09	$190,711	Central (Cook Inlet)
45527	KRSA: Kenai Habitat Restoration Evaluation and Strategy	2004	This project will summarize existing information to document how many of the original habitat problems identified in previous studies have been addressed by restoration efforts. How many problem areas were identified? How many of those have been fixed? How many are left? Who invested how much? What solutions were used? What do these solutions look like before and after? What are the implications to the fish?	S.P. Cramer and Associates, Inc.	3/1/06	12/31/07	$53,143	Central (Cook Inlet)
45850	Copper River Sockeye Radio Telemetry	2007	This project will (1) estimate the proportions of spawning sockeye salmon in each of six major spawning tributaries in the Copper River basin, and (2) describe the stock-specific run-timing pattern of sockeye salmon past the point of capture at Baird Canyon.	Native Village of Eyak	5/2/08	3/31/11	$576,097	Central (Prince William Sound)
45863	Hatchery Salmon Straying in Prince William Sound	2007	In order to better manage and preserve wild stocks of pink, chum, and sockeye salmon, PIs will: 1) initiate a comprehensive study to investigate the spatial and temporal extent of hatchery pink salmon straying into streams throughout PWS; 2) describe the genetic population structure of chum salmon from samples collected before the establishment of hatcheries in PWS; 3) determine how the potential degree of straying in the ADF&G study matches the extent of introgression resulting from hatchery-wild mating; and 4) determine the extent of hatchery sockeye salmon straying by examining otoliths of sockeye salmon carcasses collected at the major sockeye salmon spawning location and those found during other straying investigations.	ADF&G, Commercial Fisheries Division	7/1/08	6/30/12	$575,791	Central (Prince William Sound)
45869	Genetics of Copper River Sockeye	2007	PIs will develop an extensive data set on the geographic and temporal diversity of sockeye salmon returning to the Copper River and adjacent drainages that can be used to monitor the timing and pattern of migration in marine and freshwater areas and better understand exploitation rates and stock vulnerability in the Copper River fishing districts.	ADF&G, Commercial Fisheries Division	7/1/08	6/30/10	$145,970	Central (Prince William Sound)

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45002	Transboundary River Tulsequah	2000	The project will document the specific locations and habitat characteristics of spawning or high-value rearing habitat for anadromous fish species in the Tulsequah River. The project will use the minimum acceptable sampling over several seasons that is required to reliable describe the anadromous habitat values of the Tulsequah River, especially in the area currently identified by Canada as potentially being affected by discharge from the Tulsequah mine proposed. The results will be provided to Canada, British Columbia, Taku Tlingit First Nation, Douglas Indian Association, the Governor's Office, the Alaska Department of Environmental Conservation, and other interested stakeholders.	ADF&G, Habitat and Restoration Division	9/1/00	1/2/02	$95,386	Southeast
45003	Tulsequah Chief Review	2000	Participate in proposed British Columbia mine project review.	ADF&G, Sport Fish Division	6/1/01	12/1/03	$24,633	Southeast
45004	Transboundary Watershed	2000	Develop a detailed base-map of Southeast AK/Canadian transboundary rivers.	ADF&G, Sport Fish Division	5/1/01	7/31/05	$371,878	Southeast
45007	Instream Flow and Other Salmon Habitat Needs	2000	Facilitate interdepartmental coordination to meet habitat needs of salmon stocks.	Alaska Office of the Governor	11/1/01	1/1/03	$216,300	Southeast
45008	Increased Remote Release of Chum Salmon - Neets and Anita Bays	2000	Increase chum salmon production for Southeast AK fisheries.	Southern Southeast Regional Aquaculture Association (SSRAA)	10/1/01	12/1/03	$2,796,450	Southeast
45009	Salmon Fresh Express	2000	Examine the feasibility of utilizing the AK Marine Highway system to transport salmon products.	ADF&G, Office of the Commissioner	11/1/01	1/2/02	$12,360	Southeast
45010	Crystal Lake - Year 1	2000	Increase Chinook salmon production for Southeast AK fisheries.	ADF&G, Sport Fish Division	7/1/00	6/2/02	$192,700	Southeast
45011	Stakeholder	2000	Provide public participation in selecting projects to benefit salmon stocks and fisheries.	ADF&G, Office of the Commissioner	11/1/00	7/31/05	$421,991	Southeast
45012	Chinook Model	2000	Improve the accuracy of the Pacific Salmon Commission Coastwide Chinook Model annual estimates.	ADF&G, Office of the Commissioner	11/1/00	7/31/05	$516,942	Southeast
45013	Prelim Habitat Assessment	2000	Assess Southeast AK salmon habitat from upland areas to estuaries.	ADF&G, Habitat and Restoration Division	10/1/00	12/1/02	$201,676	Southeast
45014	Alsek River Chinook Escapement	2000	Estimate escapement of Chinook salmon on the Alsek River using a mark-recapture experiment.	ADF&G, Sport Fish Division	7/1/01	6/30/04	$164,073	Southeast
45015	Annual Habitat Condition	2000	Develop a database to be used to analyze the condition of salmon habitat and future risks to that habitat.	ADF&G, Sport Fish Division	4/1/01	7/31/06	$942,141	Southeast
45016	Nearshore Habitat Survey	2000	Collect data on the location, habitat type, and condition of nearshore marine salmon habitat in Southeast AK.	ADF&G, Sport Fish Division	7/1/01	7/31/05	$165,212	Southeast
45017	Road Condition/Fish Passage - Year 1	2000	Assess the condition of roads and fish passage structures and identify where restoration of habitat and fish passage is needed.	ADF&G, Habitat and Restoration Division	4/1/01	2/1/03	$76,415	Southeast
45018	Salmon Habitat Surveys in Streams and Lakes - Part 1	2000	Conduct salmon habitat and distribution surveys to document salmon streams in Southeast AK.	ADF&G, Sport Fish Division	4/1/01	12/1/03	$302,000	Southeast
45019	Enhanced Habitat Management	2000	Review salmon habitat protection authorities to avoid, minimize, or mitigate adverse impacts to salmon habitat.	ADF&G, Habitat and Restoration Division	4/1/01	6/1/03	$122,127	Southeast
45021	Nakwasina Coho	2000	Develop estimates of coho salmon escapement and assess habitat recovery from logging.	ADF&G, Sport Fish Division	7/1/01	6/30/05	$102,963	Southeast
45022	Chickamin Coho	2000	Estimate magnitude of coho salmon production and integrate with habitat data.	ADF&G, Sport Fish Division	7/1/00	6/30/04	$154,391	Southeast
45023	Taku Coho	2000	Improve the accuracy of escapement and abundance estimates of Taku River coho.	ADF&G, Sport Fish Division	7/1/01	6/30/04	$139,050	Southeast
45024	Unuk Coho	2000	Develop precise estimates of coho salmon production and integrate with habitat data.	ADF&G, Sport Fish Division	4/1/01	6/30/05	$224,773	Southeast
45025	Warm Chuck Coho - Year 1	2000	Sample coho salmon to estimate age, sex, and length and integrate with habitat data.	ADF&G, Sport Fish Division	7/1/01	6/1/03	$146,272	Southeast
45026	Troll Salmon Marketing	2000	Develop and implement a marketing plan to enhance the value of Southeast AK troll salmon products.	ADF&G, Commercial Fisheries Division	12/1/01	6/30/05	$998,585	Southeast

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45027	Identification and Protection of Marine Habitat Zones	2000	Develop a process for identifying and implementing protection zones and goals and uses for these zones.	ADF&G, Commercial Fisheries Division	12/1/01	6/30/04	$49,520	Southeast
45028	Northern Boundary Area Sockeye: Pre and In-Season Forecasting	2000	Forecast sockeye salmon returns in the Northern Boundary area to help achieve the goals of the Pacific Salmon Treaty.	ADF&G, Commercial Fisheries Division	7/1/01	9/30/04	$82,400	Southeast
45032	Sheldon Jackson Wetlab	2000	Educate both students and visitors about Pacific salmon, their habitats, and their sustainability.	Sheldon Jackson College	2/1/02	6/30/03	$20,898	Southeast
45033	Fisheries Education Signage Sitka Harbor	2000	Install informative signs in visitor traffic areas of the Sitka harbors.	City of Sitka	2/1/02	9/30/03	$8,240	Southeast
45034	Chilkat River Boat Effect Study	2000	Determine the effect of boat usage on the salmon habitat in the Chilkat River.	ADF&G, Habitat and Restoration Division	4/1/02	12/1/02	$20,600	Southeast
45035	Information Development and Exchanges	2000	Develop information exchanges among the Columbia River Inter-Tribal Fish Commission, the State of Alaska, and Alaska Native organizations to help build ties.	City of Angoon	2/1/02	12/1/03	$46,347	Southeast
45038	Technical Assistance to Southeast Sustainable Salmon Fund Project	2000	Provide technical assistance and scientific expertise to the agency's sustainable salmon initiative, with focus on AKSSF.	ADF&G, Office of the Commissioner	7/1/01	6/1/03	$102,003	Southeast
45039	Deer Mountain Tribal Hatchery Educational Raceway	2000	Design and installation of an educational raceway at the tribal hatchery, which will serve to educate the public about salmon and their habitat needs.	Ketchikan Indian Corporation	1/1/02	6/30/04	$45,277	Southeast
45040	Instream Flow and Other Salmon Habitat Needs	2000	Contribute to protection of instream flows for water bodies in Southeast AK to ensure fish productivity, habitat protection and instream flow needs.	ADF&G, Sport Fish Division	4/1/01	6/1/03	$164,163	Southeast
45041	Instream Flow and Other Salmon Habitat Needs	2000	ADF&G biologists postulated that changes within the lake were responsible for the decrease in its sockeye population. To examine the lake's productivity, we have been looking at changes in limnological conditions, in zooplankton populations, and in sockeye fry populations.	ADF&G, Commercial Fisheries Division	4/1/01	7/31/05	$175,100	Southeast
45042	Stikine Sockeye	2000	Estimate the abundance of sockeye salmon in the lower Stikine River.	ADF&G, Commercial Fisheries Division	4/1/01	6/30/04	$103,000	Southeast
45043	Alsek Sockeye	2000	Improve estimates of sockeye salmon escapement in the Alsek River.	ADF&G, Commercial Fisheries Division	4/1/01	6/1/03	$61,800	Southeast
45044	Southeast AK Chinook Genetics	2000	Generate baseline information for implementing a genetic stock identification program for Southeast AK Chinook salmon.	ADF&G, Commercial Fisheries Division	4/1/01	6/30/04	$265,893	Southeast
45045	Coho Salmon Aging Validation	2000	Develop aging criteria that can be used to accurately determine freshwater age.	ADF&G, Commercial Fisheries Division	7/1/01	6/30/05	$48,399	Southeast
45046	Tatsamenie Sockeye	2000	Determine and study factors influencing the survival of wild and enhanced sockeye fry in Tatsamenie Lake.	ADF&G, Commercial Fisheries Division	5/1/01	6/30/04	$144,200	Southeast
45047	Angoon Fish Buying Station	2000	Infrastructure improvements designed to improve handling of the harvest and attract fishermen to the Angoon area.	City of Angoon	6/1/01	6/30/05	$69,526	Southeast
45049	POWHA: Sockeye Enhancement	2000	Increase sockeye production within permitted levels at the Klawock Hatchery as part of a multi-phase approach to restoring fish returns.	Prince of Wales Hatchery Association	6/1/01	6/30/05	$206,000	Southeast
45051	POWHA: Coho Enhancement - Year 1	2000	Infrastructure improvements to increase coho salmon production to permitted level.	Prince of Wales Hatchery Association	6/1/01	4/3/03	$482,676	Southeast
45052	Northern Boundary Sockeye ID - Part 1	2000	Improve the understanding of migratory timing, routes, and mixing rates of Northern Boundary Area sockeye salmon.	ADF&G, Commercial Fisheries Division	7/1/01	7/31/05	$370,016	Southeast
45053	Tuya Lake Sockeye Access	2000	Examine the feasibility of removing the natural migration barriers located on the Tuya River.	ADF&G, Commercial Fisheries Division	7/1/01	6/1/02	$31,300	Southeast
45054	Associate of Applied Science in Fisheries Technology - University of Alaska Southeast	2000	Establish an education program to develop well-rounded fisheries technicians with a broad background in the practical and academic skills of fish and invertebrate culture.	University of Alaska Ketchikan	8/1/01	6/30/04	$139,431	Southeast

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45062	Stikine Sockeye Radio Telemetry – Tag Purchase	2000	Purchase radio tags to support the Stikine River Sockeye Salmon Telemetry Project. Adult sockeye salmon will be captured in gillnets in the lower Stikine River as part of a mark-recapture study to estimate spawning abundance.	ADF&G, Commercial Fisheries Division	1/1/05	6/30/05	$103,000	Southeast
45063	Stikine River Chinook Telemetry – Tag Purchase	2000	Purchase radio tags to support the Stikine River Chinook Salmon Telemetry Project. Adult Chinook salmon will be captured in gillnets in the lower Stikine River as part of a mark-recapture study to estimate spawning abundance.	ADF&G, Sport Fish Division	1/1/05	6/30/05	$53,560	Southeast
45064	DCED: Fisheries Economic Development Matching Grant Program - Part 2	2000	Grants for projects benefiting the salmon industry in Southeast AK will be selected via a competitive application process in order to fund projects that will improve the infrastructure of the salmon fishery and enable Alaskan producers to better compete in changing world markets.	Department of Community and Economic Development (DCED)	6/1/05	7/31/05	$256,124	Southeast
45070	Chinook Model Evaluation	2000	Provide Sport Fish Division support to the evaluation and improvement of the Chinook model.	ADF&G, Sport Fish Division	9/1/02	6/30/05	$207,545	Southeast
45071	Chinook Model - Chinook Technical Committee Co-Chair	2000	Participation in and leadership from this project will ensure sustained Chinook salmon stocks and fisheries.	ADF&G, Sport Fish Division	7/1/03	6/30/05	$109,180	Southeast
45072	Information Exchanges - Year 1	2000	Continue to facilitate exchanges between organizations having shared interests in Pacific salmon in the Pacific Northwest and Southeast AK. Complete and distribute video and associated written materials, regarding shared salmon resources.	ADF&G, Office of the Commissioner	5/1/04	6/30/05	$25,303	Southeast
45074	Transboundary River Chinook Salmon Fishery Implementation	2000	Provide for fishery monitoring and sampling for new directed Chinook fisheries in Districts 8 and 11. Conduct aerial surveys to document fleet distribution, skiff surveys to interview fishermen; collect biological information and coded-wire tags to determine stock composition.	ADF&G, Commercial Fisheries Division	2/15/05	7/31/05	$54,590	Southeast
45075	Situk Lagoon Coho Coded-Wire Tagging	2000	Supports a second year of coded-wire-tagging juvenile coho salmon on the Situk, Ahrnklin, and Lost Rivers, near Yakutat, AK. Returns of tagged fish will provide estimates of harvest for these stocks, and help provide estimates of total run.	ADF&G, Commercial Fisheries Division	3/1/05	6/30/05	$56,000	Southeast
45101	Metlakatla Tamgass Hatchery	2001	Provide salmon for the common property resource in Southeast AK.	Metlakatla Indian Community	10/1/01	12/31/02	$1,030,000	Southeast
45103	Southeast Community Watershed Stewardship Project	2001	Promote, initiate, and implement community watershed stewardship councils in Southeast AK.	Southeast Conference	3/1/02	7/31/06	$731,300	Southeast
45104	Crystal Lake Hatchery Chinook Production - Year 2	2001	Provide salmon for the common property resource in Southeast AK.	ADF&G, Sport Fish Division	7/1/03	6/30/05	$350,000	Southeast
45105	Southeast Community Watershed Stewardship Project	2001	ADF&G technical assistance to the Community Watershed Stewardship Project: supports salmon sustainability through the promotion, initiation, and implementation of community watershed stewardship councils and organizations that restore, maintain, and enhance salmon producing watersheds in Southeast AK in order to protect the economic and social well-being of the region and its local citizens.	ADF&G, Sport Fish Division	2/1/02	7/31/06	$476,617	Southeast
45107	Instream Flow Reservations	2001	Identify instream flow needs for salmon and make reservations; conduct watershed analyses across spatial and temporal scales; access water quality, quantity, and sediment data.	ADF&G, Sport Fish Division	3/1/02	6/30/06	$538,455	Southeast
45108	Ketchikan and Southeast Alaska Salmon Wastes and Utilization Studies	2001	Provide information for value-added salmon waste products and the reduction of environmental impacts by finding alternative uses.	Department of Environmental Conservation (DEC)	6/1/02	9/30/05	$450,163	Southeast
45109	Stikine River Chinook Salmon Coded-Wire Tag Project - Year 1	2001	Provide precise estimates of total Chinook salmon production, exploitation, and survival.	ADF&G, Sport Fish Division	7/1/02	6/30/04	$121,409	Southeast
45110	Salmon Habitat Surveys in Streams and Lakes - Part 2	2001	Systematic and comprehensive evaluation of essential fish habitats in freshwater ecosystems; identified location of critical and essential spawning/rearing/ migration habitats. Collaborate with landowners and managers, other agencies.	ADF&G, Sport Fish Division	9/1/02	6/30/06	$742,989	Southeast
45111	Infrastructure Assessment Request for Proposal	2001	Conduct interviews/surveys to determine Southeast AK salmon fishing industry infrastructure needs and recommend criteria for selecting project areas and projects.	ADF&G, Commercial Fisheries Division	1/1/03	9/1/03	$96,145	Southeast

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45113	District 111 Sockeye Stock ID - Year 1	2001	Provide annual estimates of marine harvest of Taku River sockeye salmon stocks.	ADF&G, Commercial Fisheries Division	7/1/03	6/30/06	$62,841	Southeast
45114	Port Armstrong Chum	2001	Produce an new increment of summer chum salmon at the Port Armstrong hatchery at the permitted capacity of 30 million eggs annually through upgrades to the existing facilities.	Armstrong Keta, Inc	4/1/03	6/30/06	$1,500,000	Southeast
45115	Salmon Education Needs Assessment	2001	Inventory curricula about AK's wild salmon and salmon industry that are currently available in Southeast AK schools, conduct needs assessment for new materials, and identify training requirements.	ADF&G - Commercial Fisheries Division	2/1/03	6/30/06	$13,522	Southeast
45117	Sentinel Transboundary - Part 2	2001	This project will work toward establishing tools which can be implemented into Sentinel Monitoring programs across Southeast AK with specific application to large transboundary river systems.	ADF&G, Sport Fish Division	9/1/05	6/30/06	$132,812	Southeast
45118	Restoration Projects Demo - Part 2	2001	Identify and plan several demonstration projects to showcase innovative fish habitat protection/restoration techniques that are not currently used in Southeast AK, but have been shown to be effective elsewhere. This project will focus on less expensive techniques suitable for private property owners. Monitoring will be conducted after the projects are constructed.	ADF&G, Sport Fish Division	9/1/05	6/30/06	$99,590	Southeast
45119	Salmon Stock Assessment Assistant	2001	The incumbent will assist in planning and operation of salmon stock assessment projects (coded-wire tagging and adult escapement mark-recapture) on the Stikine River, support for other stock assessment projects in Southeast, technical analyses, and report preparation. These duties will prepare the incumbent for advancement.	ADF&G, Sport Fish Division	11/15/05	6/30/06	$13,000	Southeast
45120	Chickamin River Chinook and Coho Salmon Coded-Wire Tagging - Part 1	2001	Chinook and coho salmon smolt will be coded-wire tagged in Spring 2006 to estimate smolt abundance, harvest, survival, and exploitation.	ADF&G, Sport Fish Division	4/1/06	6/30/06	$36,050	Southeast
45121	Haines Office/Lab Upgrades/Replacement - Year 1	2001	Replace and upgrade an existing pre-statehood facility that is marginally functional with a new energy efficient modular office/lab facility. The facility will include many features that currently do not exist, but are necessary to better manage the fisheries in Lynn Canal.	ADF&G, Office of the Commissioner	6/1/06	7/31/06	$77,250	Southeast
45302	Coded-Wire Technician for Coded-Wire Tag Lab	2001	Provide for timely processing of coded-wire tags utilized in other AKSSF projects.	ADF&G, Commercial Fisheries Division	7/1/02	6/30/06	$81,990	Southeast
45303	Spawning Abundance of Alsek River Sockeye	2001	Estimate spawning distribution of Alsek River sockeye salmon.	ADF&G, Commercial Fisheries Division	4/1/02	8/31/04	$63,860	Southeast
45304	Subsistence Salmon Harvest Assessment and Descriptive Analysis	2001	An understanding of traditional and contemporary harvest patterns which will contribute to better salmon management practices.	ADF&G, Subsistence Division	3/1/02	6/30/06	$92,372	Southeast
45305	Klawock Subsistence Sockeye Salmon Project	2001	Identify mechanisms that may positively or adversely affect the production of sockeye and coho salmon in Klawock Lake.	ADF&G, Commercial Fisheries Division	4/1/02	3/31/05	$98,325	Southeast
45306	Tuya Lake Access Study	2001	Assess the ability of sockeye salmon to ascend the Tuya River above the natural migration barriers.	ADF&G, Commercial Fisheries Division	6/1/02	7/1/03	$147,326	Southeast
45307	Tuya Fish Passage and Harvest Structure	2001	Construction of a fish ladder and flow diversion structure at Tuya River that provides a means to harvest enhanced adult sockeye salmon.	ADF&G, Commercial Fisheries Division	5/1/02	6/30/04	$83,043	Southeast
45308	Southeast Regional Comprehensive Salmon Plan - Phase III	2001	This project will provide continued protection of wild salmon while setting goals and objectives for enhanced production in the Southeast region.	ADF&G, Commercial Fisheries Division	7/1/02	6/30/04	$166,003	Southeast
45309	Chilkat River Chum Salmon Escapement	2001	This project will allow ADF&G to estimate escapement of chum salmon to the Chilkat River.	ADF&G, Commercial Fisheries Division	7/1/02	6/30/04	$115,523	Southeast
45310	Hidden Falls Chum Expansion	2001	Infrastructure improvements to increase chum salmon production and provide for otolith marking capability.	Northern Southeast Regional Aquaculture Association (NSRAA)	7/1/02	6/30/04	$590,113	Southeast
45311	Hidden Falls Coho Expansion	2001	Increase economic opportunity for Southeast AK fisheries.	NSRAA	7/1/02	9/30/04	$1,024,850	Southeast
45312	Medvejie Chum Salmon Expansion	2001	Infrastructure improvements to increase chum salmon production and provide for otolith marking capability.	NSRAA	7/1/02	12/1/03	$1,077,380	Southeast

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FFY 2000-2010

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45313	Petersburg Area Chum Salmon Fry Rearing Investigations	2001	Project will conduct site investigations, identify brood stocks, and ascertain water quality.	NSRAA	7/1/02	6/30/06	$25,016	Southeast
45314	Chilkat River Coho Salmon Escapement Mark-Recapture	2001	Provide annual estimates of coho salmon escapement by age and sex to refine escapement goals and forecast runs.	ADF&G, Sport Fish Division	7/1/02	6/30/04	$93,652	Southeast
45315	Chilkat River Coho Salmon Coded-Wire Tagging	2001	Coded-wire tagging of coho salmon smolt will provide the baseline information to produce sustainable long-term fishing opportunities.	ADF&G, Sport Fish Division	7/1/02	6/30/04	$123,600	Southeast
45317	Alsek River Chinook Salmon Escapement	2001	Provide annual estimates of Chinook salmon escapement by age and sex to refine escapement goals and forecast runs.	ADF&G, Sport Fish Division	7/1/02	6/30/06	$59,740	Southeast
45318	Warm Chuck Coho - Year 2	2001	Precise estimates of total coho salmon production, exploitation, and survival will be obtained.	ADF&G, Sport Fish Division	7/1/02	6/30/06	$133,741	Southeast
45319	Chickamin River Chinook and Coho Salmon Coded-Wire Tag Part 2	2001	Develop precise estimates of salmon production, exploitation, harvest, and survival.	ADF&G, Sport Fish Division	7/1/02	6/30/06	$209,583	Southeast
45320	Crescent Lake Sockeye Escapement Estimation	2001	Escapement estimates will assist ADF&G with managing this wild/enhanced mixed fishery to ensure sustainable production of wild sockeye salmon from Crescent and Speel Lakes.	Douglas Island Pink and Chum, Inc. (DIPAC)	6/1/02	12/1/03	$136,372	Southeast
45321	Gastineau Channel/Sheep Creek Net Pen Complex	2001	The construction of additional net pens will reduce the densities of fry to acceptable levels, increasing fitness and marine survival of enhanced salmon fry.	DIPAC	7/1/02	3/1/03	$280,081	Southeast
45322	Habitat Database Field Verification and Reporting	2001	Complete work on the Southeast AK salmon habitat database.	ADF&G, Sport Fish Division	7/1/03	7/31/06	$164,800	Southeast
45323	Salmon Escapement Database Integration	2001	Improve salmon escapement data storage and retrieval system and link to broader Southeast AK salmon database system.	ADF&G, Sport Fish Division	10/1/02	6/30/06	$299,627	Southeast
45324	Coho Pre-Smolt Enhancement Research	2001	Research lakes in central and southern Southeast AK for potential coho pre-smolt release sites.	Southern Southeast Regional Aquaculture Association (SSRAA)	10/1/02	12/31/05	$136,743	Southeast
45325	Port Armstrong Coho Expansion	2001	Increase coho production for Southeast AK fisheries.	Armstrong Keta, Inc.	10/1/02	12/31/05	$649,961	Southeast
45326	Data Links - Southeast Alaska Limnology Database	2001	Construct a limnology database system for 175 lakes in Southeast AK and link to broader Southeast AK salmon database system.	ADF&G, Commercial Fisheries Division	7/1/03	7/31/06	$247,781	Southeast
45329	University of Alaska Fairbanks: Wild-Hatchery Interaction	2001	Provide information on the interactions of hatchery and wild salmon in Southeast AK.	University of Alaska Fairbanks, School of Fisheries and Ocean Sciences (Juneau Center) (UAF, SFOS)	12/15/02	6/30/06	$277,913	Southeast
45330	Technical Assistance - Sport Fish	2001	Technical expertise for review of proposed projects, coordination with other organizations, and assistance to the AKSSF manager in project accounting and evaluation.	ADF&G, Sport Fish Division	12/1/02	6/30/05	$107,878	Southeast
45331	Stikine River Sockeye Mark-Recapture	2001	Provide inseason run size estimates for sockeye salmon in the Stikine River.	ADF&G, Commercial Fisheries Division	7/1/04	6/30/06	$108,077	Southeast
45333	Sheldon Jackson Water Quality	2001	Improve the quality of the water coming into Sheldon Jackson hatchery, which will increase survival of salmon smolts.	Sheldon Jackson College	2/1/03	6/30/05	$120,583	Southeast
45334	Northern Boundary Sockeye Stock ID - Part 2	2001	Estimate magnitude of boundary area sockeye runs to improve accuracy of and document compliance with District 101 gillnet and 104 purse seine fishery allocations.	ADF&G, Commercial Fisheries Division	8/1/01	7/31/06	$304,701	Southeast
45335	Genetic Stock ID Chinook	2001	Provide improved estimates of stock composition of Chinook salmon troll fisheries in Southeast AK.	ADF&G, Commercial Fisheries Division	7/1/03	12/31/06	$246,170	Southeast
45339	DCED: Alaska Salmon Marketing Grant Program - Part 2	2001	Funds projects that will improve the marketing of AK salmon, including promotional activities, familiarization tours, trade shows, related marketing travel, packaging and label design, product sampling, and personnel costs.	Department of Community and Economic Development (DCED)	1/1/04	6/30/06	$10,300	Southeast

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45342	Alsek River Chinook Salmon Escapement Test Fishery	2001	The Transboundary River Panel agreed to a limited test fishery in the lower Alsek River beginning in 2005 through 2008. This project will enable the department to monitor the first two years of this fishery in 2005 and 2006.	ADF&G, Commercial Fisheries Division	5/1/05	7/31/06	$52,962	Southeast
45343	DCED: Targeted Fisheries Assistance Program - Southeast Shelf Life Extension - Part 2	2001	Eligible projects will be those that address the limited shelf life of fresh and frozen salmon from harvesters through the end users, and improve quality handling capabilities for salmon harvesting and tendering vessels.	Department of Community and Economic Development (DCED)	10/1/05	3/2/07	$350,200	Southeast
45344	DCED: Fisheries Economic Development Program - Part 3	2001	Funds projects that will improve the infrastructure of the salmon fishery and enable Alaskan producers to better compete in changing world markets.	DCED	12/1/05	6/30/06	$1,442,000	Southeast
45345	Haines Office/Lab Upgrades/Replacement - Year 2	2001	Replace and upgrade an existing pre-statehood facility that is marginally functional with a new energy efficient modular office/lab facility. The facility will include many features that currently do not exist, but are necessary to better manage the fisheries in Lynn Canal.	ADF&G, Office of the Commissioner	6/1/06	7/31/06	$30,900	Southeast
45201	Crystal Lake - Year 3	2002	Provide salmon for the common property resource in Southeast AK.	ADF&G, Sport Fish Division	7/1/02	6/30/03	$198,481	Southeast
45202	POWHA Coho Project - Years 2 and 3	2002	Increase coho production to permitted levels.	Prince of Wales Hatchery Association (POWHA)	7/1/02	6/30/04	$144,200	Southeast
45209	Craig: Alaska King Salmon Project	2002	Explore the feasibility of establishing a Chinook salmon run near Craig and support the work needed to obtain permits.	City of Craig	8/1/02	6/30/04	$31,109	Southeast
45211	Information System	2002	Create a user-friendly database management system for habitat and permit data.	ADF&G, Sport Fish Division	12/1/02	6/30/07	$242,502	Southeast
45212	Sentinel Transboundary - Part 1	2002	Establish tools for sentinel habitat monitoring program for transboundary watersheds.	ADF&G, Sport Fish Division	12/1/02	6/30/07	$201,872	Southeast
45213	Increment to Instream Flow - Year 1	2002	Quantify and protect instream flow requirements for an estimated 80 water body segments and continue the efforts of the second instream flow project one year. Protocols from the second project will be used for this third project regarding water body prioritization, methods and analyses used, and protection tools used.	ADF&G, Sport Fish Division	8/1/02	6/30/07	$249,615	Southeast
45214	Pink and Chum Aerial Surveys Year 1	2002	Increase aerial surveys to monitor pink and chum salmon escapements in Southeast AK.	ADF&G, Commercial Fisheries Division	7/1/03	6/30/05	$84,800	Southeast
45215	Yakutat Forelands Sockeye and Coho	2002	Improve escapement estimation for Yakutat area sockeye and coho salmon systems.	ADF&G, Commercial Fisheries Division	1/1/03	6/30/06	$470,879	Southeast
45216	Chilkat Chum Escapement	2002	Estimate age, length, and sex compositions and escapement of chum salmon to the Chilkat and Klehini Rivers.	ADF&G, Commercial Fisheries Division	7/1/04	6/30/06	$124,590	Southeast
45217	U.S. Geological Survey Gaging - Part 1	2002	Acquire hydrologic information integral to salmon research and management.	ADF&G, Sport Fish Division	8/1/02	6/30/07	$457,138	Southeast
45218	Hugh Smith Sockeye Research	2002	Provide estimates of wild and hatchery-origin sockeye juvenile abundance, survival, and size.	ADF&G, Commercial Fisheries Division	7/1/03	6/30/06	$108,356	Southeast
45219	Southeast Chinook Port Sampling - Part 1	2002	Sample spring troll fisheries for coded-wire tags in the 2004-2006 fishing seasons to document the Alaskan hatchery catch.	ADF&G, Commercial Fisheries Division	7/1/03	6/30/07	$170,794	Southeast
45241	Taku River Chum Telemetry	2002	Provide detailed information on the spawning distribution of chum salmon in the Taku River.	ADF&G, Commercial Fisheries Division	7/1/03	6/30/05	$111,102	Southeast
45242	Sentinel Habitat Use of Headwater Streams by Salmon	2002	Characterize seasonal salmonid densities in high-gradient headwater streams related to habitat parameters and define the terminal limit of salmonid presence based on geomorphic factors.	University of Alaska Fairbanks, School of Fisheries and Ocean Sciences (UAF, SFOS)	1/1/03	5/31/06	$103,000	Southeast
45243	Stikine River Coho Mark-Recapture	2002	Provide annual estimates of escapement by age and sex.	ADF&G, Commercial Fisheries Division	7/1/03	3/2/07	$142,380	Southeast
45244	Chilkat Coho Radio Telemetry Escapement	2002	Provide specific details on the handling effects and spawning distribution using a radio study to provide better escapement estimates.	ADF&G, Sport Fish Division	7/1/03	6/30/04	$70,172	Southeast

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45245	Chinook Encounters - Mortality	2002	Estimate Chinook encounters and associated incidental mortality in the winter and spring troll fishery and Southeast AK net fisheries.	ADF&G, Commercial Fisheries Division	7/1/03	6/30/06	$209,761	Southeast
45246	Chilkat Sockeye Tagging	2002	Determine the location of mainstem spawners, accuracy of Chilkat Lake weir counts, and the rate of tagging mortality.	ADF&G, Sport Fish Division	1/1/03	7/5/05	$283,250	Southeast
45247	Kake Lakes Project	2002	Estimate sockeye salmon escapement, estimate fry population, describe age and composition of adult and fry, and evaluate lake productivity.	ADF&G, Commercial Fisheries Division	7/1/03	12/31/04	$112,250	Southeast
45248	Evaluate Mass Mark Technology	2002	Evaluate the feasibility of marking salmon with strontium and calcein and recovering those marks with an electron microscope.	ADF&G, Commercial Fisheries Division	1/1/03	6/30/07	$70,467	Southeast
45249	Chilkat Jet Boat Study	2002	Quantify flow and turbidity distributions near riverbanks in the absence and presence of boating activity and conduct lab study of response of hatchling fish to flow and turbidity.	ADF&G, Sport Fish Division	4/1/03	6/30/04	$41,200	Southeast
45250	Southeast Salmon Local Knowledge	2002	Convert subsistence salmon data into an easily-usable, computer-based format, identify information gaps, and conduct training sessions on retrieving and using the data.	ADF&G, Subsistence Division	7/1/03	6/30/07	$98,917	Southeast
45251	Klag Lake Subsistence Sockeye	2002	Estimate sockeye salmon escapement and fry density, describe age, length, weight, and composition, and evaluate lake productivity.	ADF&G, Commercial Fisheries Division	7/1/03	5/31/05	$80,445	Southeast
45254	Chinook Sport and Net Fisheries	2002	Improve estimates of stock composition of all Chinook salmon fisheries in Southeast AK including sport and net, sublegal in the winter, and spring troll fisheries.	ADF&G, Commercial Fisheries Division	7/1/03	5/31/07	$330,000	Southeast
45256	Jordan Creek Coho Monitoring	2002	Obtain precise estimates of total coho production, exploitation, and survival from a small stock in northern inside Southeast AK.	ADF&G, Sport Fish Division	7/1/03	6/30/07	$174,954	Southeast
45257	Slippery Creek Coho	2002	Obtain precise estimates of total coho production, exploitation, and survival from a small stock in central inside Southeast AK.	ADF&G, Sport Fish Division	7/1/03	6/30/07	$203,626	Southeast
45258	Alternative Methods Escapement Goals	2002	Develop an escapement goal for the Unuk River Chinook salmon stock using traditional spawner-recruit methods and compare to rearing and spawner capacity measurements and habitat-based approaches.	ADF&G, Sport Fish Division	7/1/03	6/30/06	$108,000	Southeast
45259	Restoration Projects-Demo - Part 1	2002	Identify and plan several demonstration projects to showcase innovative fish habitat protection and restoration techniques not currently used in Southeast AK.	ADF&G, Sport Fish Division	1/1/03	6/30/07	$49,340	Southeast
45260	Monitoring Coho Salmon Smolt Yield	2002	Evaluate the use of smolt yield as a tool for measuring the relationship of habitat condition to coho salmon production.	ADF&G, Sport Fish Division	7/1/02	6/30/07	$293,550	Southeast
45261	Technical Assistance - Industry Plan	2002	Provides staff support to the AKSSF program to ensure that the Southeast AK salmon industry remains sustainable and that the highest priority issues and information needs are addressed.	ADF&G, Commercial Fisheries Division	1/1/03	2/8/07	$80,351	Southeast
45262	DIPAC: Chum Salmon Rearing Strategies	2002	Learn more about the early life history of DIPAC pink and chum fry immediately after release and determine if a modified rearing strategy could improve the marine survival of these fish.	Douglas Island Pink and Chum, Inc. (DIPAC)	4/1/04	12/31/05	$199,820	Southeast
45263	Predation on Wild and Hatchery Chum Fry	2002	Examine the spatial and temporal incidence of piscine predation on chum salmon fry during their initial marine residency periods in nearshore and offshore habitats of Taku Inlet and adjacent waters, to allow comparisons of the relative abundance of the two stock types in the areas sampled.	ADF&G, Commercial Fisheries Division	5/9/03	6/30/07	$105,236	Southeast
45264	SSRAA: Increased Summer Chum	2002	Provide additional hatchery chum production, worth approximately $1.3 million in annual harvest value.	Southern Southeast Regional Aquaculture Association (SSRAA)	6/1/03	6/30/04	$600,180	Southeast
45265	DNR: Road Condition-Fish Passage - Year 1	2002	Collaborate with local, state, federal and tribal governments, landowners, and the timber industry to monitor and assess the condition of roads and stream crossings, including fish passage, and prioritize restoration efforts, on State, Mental Health Trust, University, municipal, and private lands.	Department of Natural Resources, Division of Forestry (DNR)	7/1/03	6/30/07	$283,128	Southeast
45267	DCED: Fisheries Economic Development Program for 2003	2002	This projects funds an infrastructure grant program for the Alaska salmon industry.	Department of Community and Economic Development (DCED)	7/1/03	6/30/07	$4,468,952	Southeast

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45268	Taku Wild-Hatchery Chum Study	2002	Explore the relationship between wild Taku chum stocks and hatchery chum production from Douglas Island Pink and Chum, Inc. facilities in the Juneau area in an effort to determine whether there are effects on the wild stock.	University of Alaska Fairbanks, School of Fisheries and Ocean Sciences (Juneau Center) (UAF, SFOS)	11/1/03	5/31/07	$334,680	Southeast
45271	KWC: Three Mile Basin Roads	2002	Implement erosion control and road closures at sites identified in the ADF&G road condition survey, to reduce fine sediment input to spawning and rearing habitat in Three-Mile Creek.	Craig Community Association for Klawock Watershed Council (KWC)	5/1/03	6/30/05	$93,928	Southeast
45272	KWC: Hatchery Creek Erosion and Sediment Control	2002	Reduce erosion and sediment throughout the Hatchery Creek Basin to protect fish habitat. Stabilize erosion and reduce sediment from the Hatchery Creek Basin using the Erosion Control Plan.	Craig Community Association for KWC	7/1/04	12/31/05	$41,922	Southeast
45273	KWC: Southeast Klawock Lake Area Roadway Management Project	2002	Deactivate and maintain roadways in Southeast Klawock Lake area. Install bridge to gain access to areas needing restoration. Remove drainage structures. Reduce erosion and sediment at 29 sites.	Craig Community Association for KWC	7/1/04	12/31/05	$163,325	Southeast
45274	KWC: Three Mile Basin Roadway Management and Erosion Control Project	2002	A certified contractor will be hired for fish habitat stabilization activities which will include construction of water bars, removal of culverts, placement of erosion control measures, reestablishing ditches, and seeding in the Three-Mile Sub Basin within the Klawock Watershed.	Craig Community Association for KWC	9/30/05	12/30/06	$79,236	Southeast
45275	KWC: Klawock Watershed Project - Phase I	2002	The project will reduce the amount of sediment and erosion into streams in the basin, improving water quality and fish habitat. This phase of the project includes the installation of bridges and new culverts in the current road system.	Craig Community Association for KWC	4/1/06	6/30/07	$116,263	Southeast
45276	KWC: Klawock River Trail	2002	This project is to build a foot trail that is handicap accessible the full length of Klawock River on the north side where sport fishing is heavy throughout the year. The riverbanks and tributaries are being destroyed by non-directed foot traffic causing excessive sediment being released into the river, causing riverbank erosion and completely destroying prime fish habitat.	Craig Community Association for KWC	3/31/06	6/30/07	$5,140	Southeast
45277	Chilkoot Lake Sockeye Salmon Radio Telemetry	2002	The primary goal of this project is to monitor the sockeye salmon spawning escapement distribution into the Chilkoot River watershed with radio transmitters. The secondary goal of this project is to measure handling mortality of sockeye salmon at the Chilkoot River weir, as well as test the efficiency of the visual counts of fish at this weir.	ADF&G, Commercial Fisheries Division	3/5/07	6/30/07	$64,249	Southeast
45278	Southeast Salmon Management Support	2002	This project provides equipment, supplies, and repair services necessary to support Southeast AK salmon research and management programs of ADF&G's Region I Commercial and Sport Fisheries Divisions.	ADF&G, Commercial Fisheries and Sport Fish Divisions	5/4/07	6/30/07	$265,447	Southeast
45279	Haines Office/Lab Upgrades/Replacement - Year 4	2002	This project is a continuation of AKSSF Project 45702. The goal these projects is to replace the existing substandard Haines office with a new 1,700 sq. ft. energy efficient upgraded modular facility that is comprised of office/work spaces, a small public meeting/conference room, a functional dry lab for fisheries research, additional storage, and upgraded communications and technology capabilities. Additionally, we will improve safety and reduce any environmental fuel spill impacts to the area with the installation of an explosion proof fuel storage unit with built-in secondary containment features.	ADF&G, Office of the Commissioner	5/8/07	6/30/07	$93,547	Southeast
45282	DEC: Alaska Clean Water Actions - Year 1 (ACWA)	2002	The ACWA program brings the State resource agencies (DEC, ADF&G, and the Department of Natural Resources) together to deal with our waters in a coordinated and cooperative method, via a competitive grant program. This project represents ADF&G's contribution to fund for three years projects in Southeast AK with emphasis on priority salmon waters.	Department of Environmental Conservation (DEC)	7/1/04	6/30/07	$130,418	Southeast
45284	DCED: Salmon Marketing Program - Part 4	2002	Funds projects that will improve the marketing of Alaskan salmon, including promotional activities, familiarization tours, trade shows, related marketing travel, packaging and label design, product sampling, and personnel costs.	Department of Community and Economic Development (DCED)	1/1/04	6/30/07	$660,078	Southeast
45285	DNR: Canadian Mine Project Review - Year 1	2002	Supports DNR's Large Mine Team's review of the Tulsequah Chief, Galore Creek, Shaft Creek, and possibly other mine projects in British Columbia that have the potential to impact water quality and fisheries resources.	Department of Natural Resources (DNR)	3/1/04	6/30/07	$78,800	Southeast

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45287	Craig: Port St. Nick Hatchery	2002	Construct a small Chinook enhancement facility adjacent to the City of Craig water treatment plant. Initially produce 250,000 Chinook smolts for release into the Port St. Nicholas River, with an estimated 6,250 adult returns, at an expected $100 value per fish to the local economy.	City of Craig	11/1/04	6/30/07	$173,958	Southeast
45288	Information Exchanges - Year 2	2002	Continue to facilitate exchanges between organizations having shared interests in Pacific salmon in the Pacific Northwest and Southeast AK. Complete and distribute video and associated written materials regarding shared salmon resources.	ADF&G, Office of the Commissioner	7/1/05	6/30/07	$7,260	Southeast
45291	Salmon Habitat Surveys Lakes and Streams - Part 3	2002	This project involves the systematic and comprehensive evaluation of essential fish habitats in freshwater ecosystems; documents/catalogues anadromous water bodies; and identifies location of critical and essential spawning/rearing/migration habitats. The project will collaborate with landowners and managers, and other agencies.	ADF&G, Sport Fish Division	9/1/05	6/30/07	$156,477	Southeast
45292	DCCED: Targeted Fisheries Assistance Program - Southeast Shelf Life Extension	2002	Eligible projects will be those that address the limited shelf life of fresh and frozen salmon from harvesters through the end users. Potential awards will include demonstration systems in the water or ice used in a processing plant, project using modified atmosphere packaging for fresh shipments, project moving shelf-life-extended fillets overland, and projects upgrading chilling capability of harvesting, tendering, or transporting vessels.	Department of Commerce, Community, and Economic Development (DCCED)	10/1/05	6/30/07	$973,855	Southeast
45293	Chilkat River Adult Fall Chum and Coho Salmon Assessment	2002	Funding for this project will be used to operate the Chilkat fish wheels during the fall of 2006 to count and sample fall chum and coho salmon for age, sex, and length. In addition, all coho will be examined for missing adipose fins. Over 26,000 coho salmon smolt were given a coded-wire tag and an adipose fin clip prior to being released back into the Chilkat River in 2005. Those fish will be returning as adults in 2006; we need to know the proportion with coded-wire tags to estimate smolt production and adult harvest for this stock.	ADF&G, Commercial Fisheries Division	7/1/06	6/30/07	$75,397	Southeast
45294	Blossom River Chinook Salmon Escapement - Year 2	2002	Estimate the escapement of Chinook salmon in 2006. This proposal will assist in defining the Blossom River-specific expansion factor and the inter-annual variability of the peak survey index.	ADF&G, Sport Fish Division	7/1/06	6/30/07	$34,940	Southeast
45295	Nakwasina River Coho Stock Assessment - Year 2	2002	In the fall of 2006, a crew of two will capture returning adult coho inriver and inspect them for presence or absence of coded-wire tags that were applied in spring 2005. Adult escapement will be estimated simultaneously through the use of an open population mark-recapture experiment. These efforts, in conjunction with sampling of the marine fisheries will provide annual estimates of smolt abundance, harvest distribution, escapement, exploitation, survival, and timing.	ADF&G, Sport Fish Division	7/1/06	6/30/07	$64,999	Southeast
45296	Amlaga Harbor Net Pen Complex	2002	Overcrowding has resulted in density-related problems that threaten the health and survival of rearing salmon fry. The site is also vulnerable to severe spring storms which threatens the safety and integrity of the net pen complex. Development of a new pen complex, with more pens to reduce rearing densities and better engineering to withstand extreme weather conditions, is critical in order to insure the long-term success of the program.	Douglas Island Pink and Chum, Inc. (DIPAC)	7/1/06	6/30/07	$412,000	Southeast
45298	Fisheries Long Term Business Plan	2002	Funds will be used to generate a strategic plan that will advise the State of Alaska in fulfilling its charge to maximize the value of AK salmon resources to Alaskans.	Alaska Seafood Marketing Institute (ASMI)	10/20/06	6/30/07	$77,250	Southeast
45299	Atlantic Salmon and Invasive Species Prevention - Part 3	2002	The four objectives of this project will increase capacity to address invasive species threats to Southeast AK salmon resources: continue mapping intertidal areas in coastal Southeast AK developing baseline ecological information; complete a Yakutat pike eradication plan and begin implementation; develop public service announcements regarding identification of invasive Atlantic salmon; and snorkel survey the Situk River drainage for the presence of young Atlantic salmon.	ADF&G, Office of the Commissioner	2/1/07	6/30/07	$205,353	Southeast
45356	DCCED: Targeted Fisheries Assistance Program - Southeast Shelf Life and Vessel Quality - Part 4	2003	Eligible projects will be those that address both the limited shelf life of fresh and frozen salmon from harvesters through the end users, and the quality handling capabilities for salmon harvesting and tendering vessels in Southeast AK.	Department of Commerce, Community, and Economic Development (DCCED)	7/1/07	5/30/08	$367,243	Southeast

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45357	DCCED: Alaska Salmon Marketing Grant Program	2003	Grantees were selected via a competitive application process intended to assist Alaskan salmon marketers to fund industry's "best thinking" on how to most effectively market wild salmon from Southeast AK.	Department of Commerce, Community, and Economic Development (DCCED)	12/5/07	06/30/08	$276,339	Southeast
45358	DCCED: Fisheries Economic Development Grant Program - Part 4	2003	Funds projects that will improve the infrastructure of the salmon fishery and enable Alaskan producers to better compete in changing world markets.	Department of Commerce, Community, and Economic Development (DCCED)	12/5/07	06/30/08	$545,976	Southeast
45359	DCCED: Targeted Fisheries Assistance Program - Southeast Salmon Vessel Quality Upgrade Program	2003	Improving chilling at the point of capture is a primary objective. Eligible projects include refrigerated seawater systems, hold insulation, freezers, and other quality upgrades.	Department of Commerce, Community, and Economic Development (DCCED)	12/7/07	06/30/08	$375,185	Southeast
45415	Coffman Cove: Chinook - Phase II	2003	The goal of this project is to increase local Chinook catch near the City of Coffman Cove for the economic benefit of the community. The intent is to operate a release sight for 0-age Chinook from net pens in saltwater in Coffman Bay. This project activity includes partial retrofitting of Port St. Nicholas incubation room and rearing area to accommodate Coffman Cove production for 2006, as well as the acquisition and set-up of net pens.	City of Coffman Cove	9/22/06	6/1/08	$202,331	Southeast
45416	Southeast Region Fresh Seafood Air Transportation Project	2003	The objective of this project is to increase southbound airfreight capacity for salmon. This means refrigerated or insulated cargo capacity and provision of service at appropriate and predictable times. An association of processors has expressed an interest in combining their efforts and products to establish a program which will attract additional Southeast AK airfreight capacity. In addition, there are other parties that would be interested in airfreight improvements including various gear groups, individual catcher-shippers, and transportation companies.	Southeast Conference	12/10/06	6/30/07	$36,050	Southeast
45418	Stikine Chinook Mark-Release Rock Island	2003	Returning Stikine River Chinook salmon will be captured in set gillnets, measured, sampled for scales, tagged, inspected for adipose fin clips, and released. Tagged fish will be recaptured in the Canadian test fishery. Mark recapture data will be used to estimate in-season abundance.	ADF&G, Sport Fish Division	7/1/03	6/30/05	$120,291	Southeast
45420	Northern Boundary Sockeye Stock ID - Part 3	2003	Develop DNA baselines for sockeye salmon populations from Southeast AK and Canada that contribute to the Northern Boundary fisheries. Fin tissues will be assayed for DNA markers. Analyze the ability of these reporting groups to discriminate between AK and Canadian sockeye salmon stocks for potential application to mix-fishery analysis.	ADF&G, Commercial Fisheries Division	1/1/04	12/31/06	$274,988	Southeast
45421	District 101 Sockeye Stock ID	2003	Estimate the contribution and time and area distribution of Hugh Smith Lake sockeye salmon to the District 101 gillnet and seine fisheries in Revillagigedo Channel, through sampling sockeye salmon otoliths at cold storage facilities in Ketchikan or on the fishing grounds.	ADF&G, Commercial Fisheries Division	5/1/04	6/30/06	$109,603	Southeast
45432	Yakutat Coho Coded-Wire Tag and Escapement	2003	Coho salmon smolts will be coded-wire tagged in the Situk, Ahrnklin, and Lost Rivers near Yakutat, and spawning escapement will be estimated in the Ahrnklin River. The objective is to obtain harvest and escapement estimates in inshore and offshore fisheries.	ADF&G, Commercial Fisheries Division	4/15/04	12/31/06	$130,295	Southeast
45433	Blossom River Chinook Escapement - Year 1	2003	Re-implement a mark-recapture program to estimate the total escapement of Chinook salmon to the Blossom River for two years. Provide estimates of total escapement and verify aerial survey. Data will be used to revise escapement goals and improve fishery management.	ADF&G, Sport Fish Division	7/1/04	6/30/07	$102,500	Southeast
45434	Salmon Lake Coho Stock Assessment	2003	A weir will be established at the outlet of Salmon Lake and coho salmon enumerated between August 15 and October 31. An in-lake mark-recapture approach will be used to estimate the 2004 escapement, smolt production, survival, and exploitation.	ADF&G, Sport Fish Division	7/1/04	6/30/06	$100,000	Southeast
45435	Stikine River Chinook Telemetry	2003	Evaluate current methods to estimate escapement and identify critical spawning habitat. Capture adult Chinook in gillnets in the lower Stikine as part of a mark-recapture study to estimate spawning abundance. Radio tag and track Chinook in the Stikine during 2005.	ADF&G, Sport Fish Division	7/1/04	6/30/06	$26,340	Southeast

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45436	POWHA: Klawock Weir Improvements	2003	Install an improved superstructure to the Klawock weir. The face of the weir needs to be angled back to 45° or less so there is more surface area for water to flow through the pickets. This will hold the weir in place, help control erosion underneath, and clear debris from the face. A fixed bottom channel is needed to secure the weir to the river bottom.	Prince of Wales Hatchery Association (POWHA)	2/10/04	6/30/04	$27,501	Southeast
45437	Falls and Klawock Sockeye Assessment	2003	Oversee six sockeye salmon assessment projects for three years. Funds positions responsible for proposals, progress reports, budgets, general research direction, presentations to the public and subsistence councils, plus fieldwork including training, forms, protocols, and crew scheduling.	ADF&G, Commercial Fisheries Division	7/1/04	12/31/07	$339,755	Southeast
45439	Domestication Selection in Southeast Chinook	2003	University of Alaska - Fairbanks will analyze the genetics of returning Chinook from Little Port Walter hatchery on Baranof Island in comparison to the wild stocks from which the hatchery brood stock was taken in the 1970's. The intent is to determine if there is any divergence among these populations which could indicate domestication behavior and an implied reduction of the "fitness" of the hatchery fish.	University of Alaska Fairbanks, School of Fisheries and Ocean Sciences (Juneau Center) (UAF, SFOS)	4/15/04	5/31/07	$116,201	Southeast
45440	ADF&G Vessel Maintenance Facility - Construction	2003	Construct a vessel maintenance facility located in Juneau, AK to be used for the maintenance and repair of vessels and the design and maintenance of field equipment and supplies.	ADF&G, Division of Administration	4/1/04	12/30/06	$681,880	Southeast
45441	Stikine Sockeye Radio Telemetry	2003	Upstream migrating adult sockeye will be caught at Rock Island Eddy, approximately 13 km downstream of the U.S./Canada border, tagged, and marked with FLOY tags before being released. Stationary radio tracking receivers will be placed at 13 upstream sites to determine success of migration of tagged fish. Aerial tracking flights will estimate spawning locations.	ADF&G, Commercial Fisheries Division	4/1/04	3/2/07	$78,770	Southeast
45442	Chilkat Lake Sockeye Escapement	2003	Operate ADF&G fish wheels to capture chum salmon for tagging in the fall, as well as recovery efforts on spawning grounds late into the sampling season. Operating the Chilkat River fish wheel project for monitoring and estimating escapement and age, sex, and length composition of Chilkat River sockeye.	ADF&G, Commercial Fisheries Division	7/1/04	6/30/07	$184,498	Southeast
45443	Hugh Smith and Ketchikan Sockeye Escapement	2003	Estimate the spawning escapement of sockeye into Hugh Smith Lake and evaluate rehabilitation efforts there. Index the spawning escapements of sockeye into McDonald and Salmon Lakes.	ADF&G, Commercial Fisheries Division	7/1/04	6/30/07	$151,387	Southeast
45444	Traitors Pink Escapement	2003	A two-sample mark-recapture population study will be conducted to estimate the spawning population of pink salmon at Traitors Creek. This will be compared to peak aerial survey estimates and to peak observer bias-adjusted survey estimates.	ADF&G, Commercial Fisheries Division	7/1/04	6/30/07	$53,557	Southeast
45445	Chilkat Lake Sockeye Weir	2003	Provide management with an escapement assessment of sockeye salmon to the Chilkat Lake drainage, and to evaluate and update existing biological escapement goals. Sockeye will be examined for marks applied from the lower Chilkat River fish wheel project at the Chilkat Lake weir site.	ADF&G, Commercial Fisheries Division	7/1/04	6/30/07	$179,978	Southeast
45446	Chilkat Stock Assessment Biologist	2003	Serve as project leader for three Chilkat River stock assessment projects. These mark-recapture projects utilize two fish wheels to sample and mark sockeye and chum. The recovery of marked fish on the spawning grounds and the sampling of marked sockeye at the Chilkat Lake weir allows for escapement estimation and the ability to monitor salmon migration in season.	ADF&G, Commercial Fisheries Division	7/1/04	6/30/06	$67,936	Southeast
45448	Chickamin Chinook Mark Recapture	2003	The escapement of Chinook salmon will be estimated in the Chickamin River from 2004-2007 by implementing a mark-recapture study. The age, sex, and length composition will also be estimated. Fish are captured and tagged in the lower river and then later inspected for recovery of tags upriver on spawning grounds.	ADF&G, Sport Fish Division	7/1/04	6/30/08	$274,927	Southeast
45449	Chinook Age Sex Length-Year 1	2003	King Salmon and Keta Rivers, and Andrew Creek are three of 11 Chinook escapement index stocks used by ADF&G and the Chinook Technical Committee for assessing escapement abundance. Sufficient samples will be collected from post-spawning fish in each river in 2004 and 2005 to estimated escapement by age and sex.	ADF&G, Sport Fish Division	7/1/04	6/30/07	$91,815	Southeast
45450	Stock Assessment Assistant Sport Fish	2003	Assist in planning and operation of salmon stock assessment projects (coded-wire tagging and adult escapement mark-recapture) on the Stikine River, support for other salmon stock assessment projects in Southeast AK, conversion of the tagging and age, sex, length database, and technical analyses.	ADF&G, Sport Fish Division	7/1/04	6/30/06	$50,000	Southeast
45451	Stikine Chinook Coded-Wire Tag - Year 2	2003	Chinook salmon smolt from brood years 2003 and 2004 will be coded-wire tagged in spring 2005 and 2006, respectively, and tagged fish from each brood year will be recovered inriver and in marine fisheries through 2010 and 2011.	ADF&G, Sport Fish Division	7/1/04	6/30/06	$126,990	Southeast
45452	Ford Arm Lake Coho and Sockeye - Year 1	2003	Escapement, harvest, juvenile abundance, survival, and age, length, and sex composition are estimated for Ford Arm Lake coho salmon. The abundance and age, sex, length composition of the sockeye escapement are also estimated. Escapement goals will be developed and refined and management models developed.	ADF&G, Commercial Fisheries Division	7/1/04	6/30/07	$138,969	Southeast

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45455	Chilkat River Adult Coho Mark Recapture	2003	Adult coho will be sampled from the Chilkat River escapement in 2004 to estimate the age, sex, and length composition, and to determine the fraction marked with coded-wire tags implanted as smolt in spring 2003.	ADF&G, Sport Fish Division	7/1/04	6/30/06	$76,903	Southeast
45456	Chilkat River Chinook and Coho Smolt Coded-Wire Tag	2003	Chinook and coho salmon smolt will be trapped in the lower Chilkat River and coded-wire tagged in spring of 2005. Tagged fish will be recovered inriver and in marine fisheries as they return as adults.	ADF&G, Sport Fish Division	7/1/04	6/30/06	$156,740	Southeast
45457	Chuck Creek Coho Escapement - Year 1	2003	Emigrating coho smolt will be captured and coded-wire-tagged. Commercial and sport fisheries will be sampled for tagged fish to obtain harvest estimates. Returning mature fish will be captured with a weir and will be inspected for tags.	ADF&G, Sport Fish Division	7/1/05	6/30/07	$74,951	Southeast
45458	Nakwasina River Coho Stock Assessment - Year 1	2003	An open population mark-recapture experiment will estimate the escapement of coho salmon in Nakwasina River in 2005 in conjunction with coded-wire tag recovery to estimate exploitation, harvest, smolt abundance, and survival.	ADF&G, Sport Fish Division	7/1/05	6/30/06	$39,994	Southeast
45460	DCCED: Fisheries Economic Development Program - 2004	2003	Funds projects benefiting the salmon industry in Southeast AK selected via a competitive application process to fund projects that will improve the infrastructure of the salmon fishery and enable Alaskan producers to better compete in changing world markets.	Department of Commerce, Community, and Economic Development (DCCED)	7/1/03	5/30/08	$841,040	Southeast
45464	Taku River Coho Escapement	2003	Provide annual estimates of coho escapement necessary to refine and improve escapement goals and forecast runs, along with in-season abundance estimates for abundance-based management.	ADF&G, Sport Fish Division	7/1/05	6/30/06	$39,954	Southeast
45468	Professional Training - Sport Fish Division	2003	Provide professional training to improve staff skills in stock assessment and fishery management. ADF&G has long been recognized as one the world leaders in sustainable fishery management and stock conservation because of a dedicated, knowledgeable, and skilled work force. The department is likely to lose that status because of the loss of its most senior and talented staff to other agencies that offer higher pay, more benefits and less responsibility, and a lack of an influx of talented entry-level professionals.	ADF&G, Sport Fish Division	12/1/04	6/30/08	$54,898	Southeast
45470	McDonald Lake Sockeye Escapement Estimation	2003	Recalibrate the foot survey estimates of the McDonald Lake sockeye escapement by comparing the surveys to the mark-recapture estimates obtained in this study and to weir counts from the early 1980s.	ADF&G, Commercial Fisheries Division	1/1/05	6/30/07	$119,993	Southeast
45471	Salmon Stock Assessment Support	2003	Support a fisheries scientist working at headquarters to participate in stock assessments, review escapement goals, and stock status. Coordinate involvement with a reviewer that will assess whether AK's salmon fisheries should be re-certified by Marine Stewardship Council.	ADF&G, Commercial Fisheries Division	7/1/04	6/30/06	$78,903	Southeast
45472	Southeast Salmon Aerial Surveys - Year 2	2003	This project covers costs of increasing aerial surveys to monitor pink and chum salmon escapements in Southeast AK.	ADF&G, Commercial Fisheries Division	7/1/05	6/30/07	$100,000	Southeast
45474	Chinook Model Evaluation and Improvement	2003	Evaluate the Pacific Salmon Commission Chinook Model and provide improvements. A sensitivity analysis of many critical aspects will be evaluated by varying input parameters. Alternate Chinook abundance indices will be explored and developed.	ADF&G, Sport Fish Division	7/1/05	6/30/06	$80,425	Southeast
45475	District 111 Sockeye Stock Identification - Year 2	2003	This project, in conjunction with other programs, will provide annual estimates marine harvest of Taku River sockeye salmon stocks.	ADF&G, Commercial Fisheries Division	7/1/06	6/30/08	$40,568	Southeast
45476	Chinook Troll Genetic Stock ID	2003	Provides genetic stock ID of the component stocks of Chinook salmon harvested in the Southeast AK troll fishery. Chinook salmon will be sampled from the landings for the summer and early winter fisheries in 2005 and the late winter and spring fisheries in 2006. Samples will be analyzed in the lab in Anchorage and the estimated stock contribution will be reported to regional managers and researchers.	ADF&G, Commercial Fisheries Division	4/1/05	6/30/07	$131,925	Southeast
45478	Coffman Cove: Enhancement Feasibility - Phase 1	2003	Initiate feasibility studies for permitting, construction, and maintenance of a small Chinook enhancement facility. The proposed facility would produce 250,000 Chinook smolt for release into a local watershed and is expected to be operated in partnership with the already-permitted Craig Chinook salmon hatchery. Chinook fry are expected to be incubated and reared in Craig then transported to Coffman Cove for final grow-out and release. Project may result in an estimated 6,250 adults returning annually.	City of Coffman Cove	6/1/05	8/31/06	$45,168	Southeast
45479	University of Alaska Southeast – Ketchikan: Fisheries Technology Distance Delivery	2003	Convert the Atomic Absorption Spectrophotometry and Certificate of Fisheries Tech to a web based delivery format. This will allow rural Alaskans and salmon enhancement workers to access a college degree program while still living in their communities or maintaining employment.	University of Alaska Southeast (UAS)	8/1/05	6/30/06	$25,750	Southeast

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45481	Southeast Alaska Chinook Salmon Port Sampling - Part 2	2003	Sampling Alaskan Spring troll fisheries for coded-wire tags. *This project continues work begun is project 45219.*	ADF&G, Commercial Fisheries Division	7/1/06	6/30/08	$63,594	Southeast
45482	DCCED: Boston Seafood Show - Southeast Alaska Event	2003	The State of Alaska will host a second AK event, the Go Wild in Alaska Style: 2006 Boston, administered through the DCCED to build on the 2005 event, and to promote other positive salmon consumption trends in the US. This year's event,is similar to the 2005 event, with a Southeast AK salmon theme.	Department of Commerce, Community, and Economic Development (DCCED)	3/15/06	3/5/07	$55,759	Southeast
45499	Thematic Mapping of Southeast Alaska Salmon Fisheries	2003	The Alaska Department of Labor and Workforce Development, Research and Analysis Section will generate robust, full-size maps and charts, utilizing in-house data and resources, ADF&G data, and Limited Entry Commission data, using a large-scale plotter. Maps and charts are important in demonstrating the economic impact and value of the Southeast AK salmon fishery. This project will fill an unmet need, making it possible to display salmon fisheries-related data on a single map at a higher level of detail than is possible with a standard printer because a plotter can make large maps, insets of tables, charts, graphs, and text can be included.	Department of Labor	12/11/06	6/30/07	$5,150	Southeast
45825	Haines Salmon Habitat Assessment - Year 1	2003	The purpose of this project is to provide regional resource managers with new characteristics to help identify, protect, and manage important areas of salmon habitat in Southeast Alaska. PI will expand the ongoing salmonid distribution assessment to include a more extensive habitat assessment and water quality and quantity analysis component. With this information, TWC will analyze site-specific habitat characteristics (e.g., vegetation, substrate, and hydrology) and establish baselines for water quality and quantity for selected systems.	Takshanuk Watershed Council (TWC)	7/2/08	12/31/09	$17,197	Southeast
45503	SRA: Planning for Purse Seine Stabilization Program	2004	Refine and revise the draft SRA seine permit reduction plan in advance of seeking substantial grant and loan funds with which to accomplish the buyback. Legal review and outreach with the effected permit holders.	Southeast Revitalization Association (SRA)	9/1/04	12/31/05	$148,422	Southeast
45550	KWC: Klawock Watershed Project - Phase II	2004	The project will reduce the amount of sediment and erosion into streams in the basin, improving water quality and fish habitat by implementing road closures in the West Hatchery Creek Basin.	Craig Community Association, for Klawock Watershed Council (KWC)	4/1/06	9/30/06	$123,572	Southeast
45573	KWC: Habitat 1	2004	The Riparian Thinning Prescriptive Plan and riparian thinning of 103 acres in the Klawock watershed, on property owned by Klawock Heenya Corporation and Shaan Seet, Inc., will protect, restore, and improve fish habitat and fish passage.	Klawock Cooperative Association for Klawock Watershed Council (KWC)	3/23/07	10/3/07	$67,423	Southeast
45574	KWC: Klawock Watershed Intern	2004	The Klawock Watershed Master Plan Update (AKSSF project #45691) identified a need for involvement of the public in caring for the watershed. Surveys completed by the community in July of 2008 identified the Klawock River, tidal zone, and community areas as priorities for the annual watershed Clean Up.	Klawock Cooperative Association for Klawock Watershed Council (KWC)	2/1/09	3/31/09	$5,683	Southeast
45579	Chickamin Coho Escapement - Yr 3	2004	In fall 2008, adult coho will be inspected inriver for the presence or absence of an adipose fin, to estimate the marked fraction of smolt CWTd in spring 2007. Age, sex, and length (ASL) data will also be collected. The escapement will be estimated through expansion of the peak aerial survey count.	ADF&G, Commercial Fisheries Division	7/1/08	6/30/09	$25,441	Southeast
45086	KWC: Creeks Water Quality Study	2005	The Klawock Watershed Master Plan Update identified the need for a water quality study involving three creeks within the watershed, on tribal land owned by Klawock Heenya Corporation: Blue Water Creek, Crab Creek, and Deadhead Creek. These creeks have extremely high dissolved oxygen (DO) levels year-round, high sediment levels, and high temperatures throughout the year. This study of the full length of each of the three creeks will help resource managers determine and remediate the causes for high levels of DO, sediment, and temperature.	Klawock Cooperative Association and Klawock Watershed Council	3/1/09	12/31/09	$2,026	Southeast
45602	Refine Optimum Escapement Goals for Sockeye, Chinook, and Coho Salmon	2005	Provide funds for several activities that will assist Escapement Goal Policy Implementation Team and enable the Department to conduct improved analyses and refinement of escapement goals for sockeye, Chinook, and coho salmon for each of these areas through the Winter 2008-2009 stage of the cycle.	ADF&G, Commercial Fisheries Division	11/1/05	6/30/09	$74,611	Southeast

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45605	Auke Lake Coho Indicator Stock and Sockeye and Pink Salmon Population Monitoring Year 1	2005	For Auke Lake sockeye and pink salmon, this project continues data collections on total counts and samples of size and age of juveniles and adults that span over four decades. These data sets are among the longest and most complete in Southeast AK and provide useful biological indicators of the freshwater production and marine survival.	ADF&G, Sport Fish Division	3/1/06	6/30/08	$27,800	Southeast
45607	Pre and In-season Estimates of Coho Salmon Run Timing	2005	Categorize and summarize Southeast AK coho salmon run timing from 1981 through 2004 and correlate timing with biological and physical oceanographic variables that may explain year to year variation in run timing. The project will also examine the relationship in timing between coho and pink salmon. Statistical timing models would be developed during early 2006 and applied to the 2006 coho salmon fishery.	David Gaudet Fisheries and Natural Resource Consultants (NRC)	2/1/06	1/31/07	$45,887	Southeast
45609	Hugh Smith Sockeye Adult and Juvenile Sampling	2005	A comprehensive program will be conducted to estimate juvenile survival, abundance, and size, and to partition abundance into wild-origin and hatchery-origin fish in years affected by supplemental stocking.	ADF&G, Commercial Fisheries Division	3/15/06	6/30/07	$109,180	Southeast
45610	Chinook Age, Sex, and Length Year 2	2005	Staff will collect carcasses and/or post spawning live Chinook salmon, which will be measured and sex will be determined. Five scales will be removed and placed on gummed cards. Data will be recorded on standard ADF&G biological-sampling forms. All sampled carcasses and live fish will be marked to ensure double sampling does not occur.	ADF&G, Sport Fish Division	7/1/06	6/30/08	$98,801	Southeast
45611	Pacific Salmon Treaty Specialist	2005	This project supports the non-perm Fisheries Biologist IV, Pacific Salmon Treaty (PST) Specialist position. This position provides support to AK's PST Commissioner and the AK delegation to the PST on salmon resource and fishery issues arising in the negotiation and implementation of the PST, serves as Chair of the U.S. Section of the bilateral Transboundary River Panel for the PST; provides expertise on state and federal action related to Pacific NW salmon stocks; and provides expertise on Pacific salmon as required.	ADF&G, Commercial Fisheries Division	7/17/06	3/31/10	$113,647	Southeast
45612	Stikine River Chinook Coded-Wire-Tagged - Year 3	2005	Chinook salmon smolt from brood year 2005 will be coded-wire tagged in spring 2007 to estimate the number of Chinook salmon smolt leaving the Stikine River in 2007. Tagged fish from each brood year will be recovered in-river and in marine fisheries from 2008 to 2012.	ADF&G, Sport Fish Division	7/1/06	6/30/08	$82,500	Southeast
45613	Warm Chuck Coho - Year 3	2005	Capture and tag coho smolt emigrating from Chuck Creek in the spring. Capture, count, and examine for tags the escapement of mature coho salmon returning to Chuck Creek from mid-August through mid-October. Estimate smolt production, marine survival and exploitation, and escapement of coho salmon from Chuck Creek.	ADF&G, Sport Fish Division	7/1/06	6/30/07	$75,000	Southeast
45621	Chilkat River Smolt Coded Wire Tagging Project - Year 1	2005	ADF&G personnel will capture smolt from the Chilkat River using baited minnow traps during April and May 2007. Smolt will be transported to a central location where they will be given a coded-wire tag, marked by clipping the adipose fin, and released. Adults will be sampled for missing adipose fins in the Chilkat River to determine the marked fraction through other studies. This information along with Chilkat coded-wire tag recoveries from ongoing marine commercial and sport fishery programs will allow us to estimate smolt production and harvest of these stocks.	ADF&G, Sport Fish Division	7/1/06	6/30/07	$79,948	Southeast
45623	Improving Escapement Estimates for Southeast Alaska Pink Salmon Stocks - Phase 1	2005	This proposal supports a research assistant to conduct analyses under supervision. To build on current and previous calibration efforts, we will attempt to derive equations to calibrate aerial counts among different observers, relate standardized counts to the number of fish in a stream, the number of fish in a stream to the total escapement in a stream, and total escapement from surveyed streams to total escapement in Southeast AK. We expect to complete the analyses allowing conversion of aerial counts to estimates of abundance of fish in the surveyed streams.	University of Alaska Fairbanks (UAF)	7/1/06	3/31/10	$106,027	Southeast
45624	Sockeye Salmon Matched Scale and Biological Marker Sampling	2005	This proposed project consists of four components, all aimed at improving stock identification studies required to meet sockeye salmon harvest sharing obligations of the Pacific Salmon Treaty: DNA Baseline Development, Northern Boundary Area Matched Sampling, Transboundary Matched Sampling, and Data Collection Programming.	ADF&G, Commercial Fisheries Division	5/1/06	6/30/09	$88,434	Southeast
45626	Instream Flow Adjudications and Hydrologic Support - Year 1	2005	This project will provide Department of Natural Resources (DNR) with funding to hire a hydrologist to assist with the adjudication of existing and future instream flow reservation applications and provide hydrologic technical support for salmon producing water bodies in Southeast AK. The project will help the DNR and ADF&G implement the MOU for improving administrative processing of instream flow reservations on a timely basis and provide hydrologic assistance for water quantity and quality issues related to anadromous water bodies in Southeast AK.	ADF&G, Sport Fish Division	7/1/06	12/31/07	$75,226	Southeast

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45627	Chickamin River Coho Escapement -Year 1	2005	Mark-recapture study to estimate escapement and age/sex/length structure of adult coho salmon in 2006. Immigrating coho salmon caught in the lower Chickamin River with set gillnets will be tagged and marked as the first of two sampling events. During the second sampling event, coho salmon will be inspected for marks on the spawning grounds. Fish will be sampled in both events for biological data including scales, sex, length, and coded-wire tags.	ADF&G, Sport Fish Division	7/24/06	6/30/07	$68,805	Southeast
45633	Situk Area Coho Research	2005	The stock assessment project has three components for the 2006 season. The first is a mark-recapture experiment to estimate the total Situk River coho salmon escapement. The second is sampling of coho salmon in the Lost and Ahrnklin Rivers to estimate the mark rate for coded-wire tagged adults in those escapements. The third is a synthesis of the first two components with related lagoon and troll fishery sampling efforts coupled with assumptions to estimate abundance of coho salmon in the Lost and Ahrnklin Rivers.	ADF&G, Commercial Fisheries Division	7/1/06	12/31/07	$79,310	Southeast
45634	CTC Biometrician II - Year 1	2005	This proposal would secure funds to hire a Biometrician II to perform biometrical analyses, statistical analyses and mathematical modeling to aid in the implementation of the Pacific Salmon Treaty and to aid in the management of Chinook salmon fisheries of Southeast Alaska.	ADF&G, Commercial Fisheries Division	5/1/06	12/31/07	$82,000	Southeast
45635	Karta River Sockeye Assessment Project	2005	In order to establish more accurate information to scientifically determine if the sockeye salmon returns are sufficient to sustain sockeye salmon populations and provide subsistence opportunities in this area, Organized Village of Kasaan will continue to collect data for sockeye salmon escapement and sockeye salmon subsistence harvest.	ADF&G - Commercial Fisheries Division	4/1/06	6/30/07	$41,439	Southeast
45639	NSRAA: Sawmill Creek Hatchery - Phase 1	2005	Permit and plan future construction of a hatchery at Sitka's Sawmill Cove Industrial Park with capacity to rear and release up to 2.5 million coho smolt to the ocean annually. Operational costs will be borne by NSRAA during the first several years until sufficient adults return to the facility, which will then pay the annual operating costs through the sale of a portion (20%) of the total return.	Northern Southeast Regional Aquaculture Association (NSRAA)	8/28/06	12/31/07	$77,250	Southeast
45647	Coffman Cove: Chinook - Phase III	2005	The goal of this project is to increase local Chinook catch near the City of Coffman Cove for the economic benefit of the community. The intent is to operate a release site for 0-age Chinook from net pens in saltwater in Coffman Bay. This project activity includes testing Sea-Ready technology applicable to Coffman Cove, final retrofitting of Port St. Nicholas incubation room and rearing area to accommodate Coffman Cove production for 2007, as well as the continued acquisition, installation, and set-up of net pens, mechanical oxygenation feature, and other equipment.	City of Coffman Cove	10/17/06	6/30/09	$475,819	Southeast
45648	Sawmill Cove Hatchery - Phase II	2005	These funds will be used to design, construct, and equip a hatchery at Sitka's Sawmill Cove Industrial Park with the capacity to rear and release up to 2.0 million coho smolt to the ocean, annually.	Northern Southeast Regional Aquaculture Association (NSRAA)	3/11/07	3/31/10	$2,271,515	Southeast
45649	KWC: Habitat 2	2005	The culvert inlet and outlet restoration funded with this project will protect, restore, and improve fish habitat and fish passage by installing step pools at ten culverts on the Klawock Hollis State Highway currently blocking fish passage. Step pool installation will allow access to an additional 9,100 feet of spawning and rearing habitat.	Klawock Cooperative Association for Klawock Watershed Council (KWC)	7/1/07	10/2/07	$10,359	Southeast
45661	Subsistence Salmon Harvest Report - Southeast/Yakutat Region	2005	The purpose of this study is the development of a Southeastern AK subsistence salmon harvest report with subsistence salmon harvest data for the years 1995 through 2005.	ADF&G, Subsistence Division	12/29/06	6/30/09	$39,671	Southeast
45662	KWC: Outreach and Education	2005	KWC proposes to develop an exciting, eye-catching brochure that will educate the local population regarding the importance and methods of maintaining a healthy watershed resulting in sustainable habitat for salmon. It will be distributed to every home, school, business, and to the visitor industry in Klawock and Craig, AK.	Klawock Cooperative Association for Klawock Watershed Council (KWC)	3/26/07	12/31/07	$17,876	Southeast
45663	KWC: Stream Survey 1	2005	Stream surveys of all of the watershed streams will be done to test water quality, turbidity levels, and oxygen levels. Data will be collected twice a week for 45 weeks and used in updating the watershed restoration plan and in making decisions related to restoration activities.	Alaska Fisheries Development Foundation (AFDF)	3/27/06	12/31/07	$23,333	Southeast

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(Exclusive of AYK SSI Earmark Projects)

FFY 2000-2010

Current to September, 2011

Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45686	KWC: 6000 Road Culvert Replacement/Fish Passage	2005	A large beaver dam has been built above one of the culverts causing extensive pooling that floods the road. This project entails removing the no-longer-used beaver dam (beavers have been trapped out), placing fish accessible culverts at three locations, and excavating a small amount of ditching at the sites.	Klawock Cooperative Association for Klawock Watershed Council (KWC)	6/1/07	10/2/07	$29,720	Southeast
45690	KWC: Erosion Controls	2005	This project will protect and restore watershed habitat on tribal land owned by Klawock Heenya Corporation and Shaan Seet, Inc. Per the current Klawock Watershed Master Restoration Plan, KWC identified the following needs: the closure of roads 5025000 and 5032000; the seeding and fertilization of three landslides in Three Mile Creek Basin; and construction of erosion controls. These measures will reduce the amount of sediment in Three Mile Creek.	Klawock Cooperative Association for Klawock Watershed Council (KWC)	3/1/08	12/31/08	$42,823	Southeast
45691	KWC: Klawock Watershed Master Plan Update 2008	2005	The updated Klawock Watershed Master Plan produced with this funding will consolidate information for use in directing future work in the Klawock watershed on public land as well as on tribal land owned by Klawock Heenya Corporation and Shaan Seet, Inc.	Klawock Cooperative Association for Klawock Watershed Council (KWC)	3/1/08	12/31/08	$71,719	Southeast
45097 (600)	Transboundary River Sockeye Salmon Genetics	2005	This project will complete genetic stock identification (GSI) analysis on sockeye salmon tissue samples collected from commercial net fisheries in areas in and near the Stikine and Taku Rivers in Southeast Alaska (SE AK). The analysis will focus on tissue samples collected in two fishing districts (108 and 111) and on improving representation of transboundary river sockeye in the SE AK baseline. An understanding of stock composition in these fisheries is important for sustainable management under the Pacific Salmon Treaty (PST).	ADF&G, Commercial Fisheries Division	5/1/10	6/30/10	$226,485	Southeast
45702	Haines Office/Lab Upgrades/Replacement - Year 3	2006	Replace and upgrade an existing pre-statehood facility that is marginally functional with a new energy efficient modular office/lab facility. The facility will include many features that currently do not exist in the current structure, but are necessary to better manage the fishery.	ADF&G, Office of the Commissioner	10/31/06	6/30/07	$77,250	Southeast
45704	Southeast Alaska Chinook Salmon Port Sampling - Part 2	2006	Sampling Alaskan Spring troll fisheries for coded-wire tags. This project is entirely devoted to data collection. Modeling or mathematical analysis will take place under other projects.	ADF&G, Commercial Fisheries Division	7/1/07	6/30/08	$77,600	Southeast
45705	Chilkat River Smolt Coded-Wire-Tag Project -Year 2	2006	The goal of this proposal is to continue stock assessment efforts to address information gaps for these two stocks. We propose to continue using AKSSF monies to coded-wire tag Chinook and coho salmon smolt in the spring of 2008 in the Chilkat River	ADF&G, Sport Fish Division	7/1/07	8/31/08	$114,024	Southeast
45706	Chickamin River Coho Escapement - Year 2	2006	A two-event coho salmon mark-recapture experiment will be conducted in August-October of 2007. We propose to use AKSSF funds to mark returning adult coho salmon in August-September in Event 1 and inspect fish on the spawning grounds in September-October in Event 2.	ADF&G, Sport Fish Division	7/1/07	6/30/08	$64,656	Southeast
45708	Stikine River Coded-Wire Tag Project - Year 4	2006	This project will provide estimates of smolt abundance and harvest that, combined with estimates of escapement (funded through a separate study), will also provide estimates of total production, exploitation, and marine survival by brood year for Stikine River Chinook salmon. Results will be used to implement abundance based management for this stock, an obligation of AK in the 1999 Pacific Salmon Treaty Agreement.	ADF&G, Sport Fish Division	7/1/07	6/30/08	$88,626	Southeast
45709	Chickamin River Coho Salmon Coded-Wire Tag Project	2006	Coho salmon smolts will be captured in spring 2008, implanted with a coded-wire tag, marked with an adipose fin clip, and released. In 2009, adults will be sampled for the presence of coded-wire tags inriver and in the various marine commercial and recreational fisheries. Smolt production and adult harvest will be estimated.	ADF&G, Sport Fish Division	7/1/07	6/30/08	$71,276	Southeast
45710	Mark Tag and Age Lab Support - Year 1	2006	The workload of the ADF&G Tag Lab has increased because of additional coded-wire tagging programs, recent large returns of Chinook and coho salmon, and from effects of mass marking programs instituted elsewhere along the Pacific coast. The ADF&G Thermal Mark Lab's load has also increased with increased hatchery production requiring processing of more otoliths for thermal mark recovery. This project will support the increased costs of both of these labs.	ADF&G, Commercial Fisheries Division	7/1/07	6/30/08	$83,000	Southeast
45712	Salmon Aerial Surveys - Year 3	2006	This funding will provide additional flight time to conduct aerial salmon surveys. Aerial surveys are the only methodology to adequately assess the escapement and run strength of the vast majority of pink and chum salmon streams in Southeast AK and sockeye and coho salmon streams in Yakutat.	ADF&G, Commercial Fisheries Division	7/1/07	6/30/08	$68,884	Southeast

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(Exclusive of AYK SSI Earmark Projects)

FFY 2000-2010

Current to September, 2011

Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45713	Hugh Smith Sockeye Adult and Juvenile Sampling	2006	This project will conduct a comprehensive program to estimate juvenile survival, abundance, and size, and to partition abundance into wild-origin and hatchery-origin fish in years affected by supplemental stocking. Previous AKSSF projects related to this study: 45218, 45421, and 45609.	ADF&G, Commercial Fisheries Division	3/15/07	6/30/08	$113,300	Southeast
45720	McDonald Lake Sockeye: Genetic Stock Identification - Year 1	2006	This project completes Genetic Stock Identification analysis on sockeye salmon tissue samples collected from commercial net fisheries in Southern Southeast AK. The analysis will be focused on tissue samples collected in three fishing areas, 106-30, 106-41, and 101-29 by statistical week. It will provide information on the return timing and harvest patterns of McDonald Lake sockeye.	ADF&G, Commercial Fisheries Division	7/1/07	6/30/08	$105,919	Southeast
45723	SRA: Southeast AK Fleet Consolidation Plan	2006	The Southeast salmon seine fleet is a principal southeast Alaska employer and recognizes its paramount role in certain coastal communities. To that end, it determined that the import-driven fall in salmon prices and related consolidation in the processing sector called for commensurate consolidation in the seine fleet. It is almost universally recognized that if everyone stays in the fishery, no one will be profitable and the fishery will continue to teeter on economic viability. Therefore, the Southeast Revitalization Association (SRA), (a non-profit 501(c)(5) organization run by a volunteer board), was formed for the purpose of reducing or consolidating the Southeast Alaska purse seine salmon fishery. The SRA, in concert with the Commercial Fisheries Entry Commission (CFEC), will implement a consolidation plan to permanently retire an estimated ten percent (10%) of the permits issued for the fishery. 98% of the funding for this project is for direct payments to permit holders who elect to sell and relinquish their permits; the balance is for project administration.	Southeast Revitalization Association (SRA)	2/15/08	06/15/08	$2,958,928	Southeast
45726	Coffman Cove Chinook – Ph.4	2006	The funding provided with this project will rear and release Chinook salmon in Coffman Cove and finalize the rearing strategy and equipment purchases for the Coffman Cove Chinook enhancement project. *Phase 4 continues work begun in AKSSF projects 45478, 45415, and 45647.*	City of Coffman Cove	7/1/09	3/31/11	$435,900	Southeast
45734	CTC Biometrician II - Year 5	2006	This project will continue to fund a Biometrician II to perform biometrical analyses, statistical analyses, and mathematical modeling to aid in the implementation of the Pacific Salmon Treaty (PST) and to aid in the management of Chinook salmon fisheries in Southeast Alaska (SE AK). *This project continues work begun in AKSSF projects 45634, 45707, 45830 and 45327 (800).*	ADF&G, Commercial Fisheries Division	5/1/10	5/31/11	$99,451	Southeast
45736	ACWA Program Support - Year 1	2006	Alaska Department of Environmental Conservation's ACWA program funds stewardship, monitoring, protection, and recovery activities related to anadromous water bodies in Southeast Alaska that have been deemed a high priority. AKSSF contributes to the ACWA program to support a competitive grant process that funds projects that restore, protect, or conserves water quality, quantity and aquatic habitat. This project provides support for one ADF&G employee dedicated to and instrumental to implementation of ADF&G responsibilities to the ACWA program.	ADF&G, Sport Fish Division	7/1/07	6/30/08	$19,480	Southeast
45737	ACWA Grants - Year 2	2006	This project provides funding for ACWA related actions (stewardship, monitoring, protection, recovery) related to anadromous water bodies in Southeast Alaska that have been deemed a high priority through the ACWA process. Projects that restore, protect or conserve water quality, quantity and aquatic habitat will be chosen through a competitive grant process executed by Alaska Department of Environmental Conservation.	ADF&G, Sport Fish Division	7/1/07	6/30/08	$51,500	Southeast
45738	Auke Weir, Coho, Sockeye, and Pink Monitoring - Year 2	2006	The primary objectives for the coho, sockeye, and pink salmon populations are to estimate spawning escapement by time, age, sex, and size, estimate the mixed stock harvest of the coho stock, and analyze spawner-recruit data and develop biological escapement goals. This project incorporates estimates of harvest of wild salmon and information on the biology of wild salmon to meet management objectives, and will contribute to valuable long-term data sets to provide direct measures of wild salmon populations that will address linkages between amount and quality of habitat and salmon productivity.	ADF&G, Sport Fish Division	7/1/07	6/30/08	$23,976	Southeast
45739	US Geological Survey Gaging - Part 2	2006	The goal of this project is to target water bodies identified for their importance in production of salmon and contributing to the comprehensive expansion of the regional gaging network established by the Water Resources Division of the U.S. Geological Survey.	ADF&G, Sport Fish Division, Aquatic Resources	7/1/07	6/30/08	$65,000	Southeast
45743	Hatchery Chum Salmon Straying	2006	Large-scale straying of hatchery fish into index streams that are monitored to assess spawning chum salmon populations would require ADF&G to adjust or qualify chum salmon escapement indices and escapement goals. This project will support the final year of a 3-year study to collect baseline samples from 50% of chum salmon escapement index streams in Southeast Alaska and document the occurrence and rates of straying of hatchery-produced chum salmon (study years one and two funded separately).	ADF&G, Commercial Fisheries Division	7/1/10	3/31/11	$75,112	Southeast

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FFY 2000-2010

Current to September, 2011

Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45745	DNR Canadian Mine Review - Ph 4	2006	This project will fund interagency technical reviews of numerous proposed mining projects in Canada which have the potential to negatively impact water quality and quantity in Alaska's salmon streams. *This project continues work begun in AKSSF projects 45285, 45722, and 45091 (600).*	Alaska Department of Natural Resources (DNR)	7/1/10	4/30/11	$29,354	Southeast
45760	Nakwasina River Coho Escapement	2006	In the fall of 2007, a crew of three will capture returning adult coho in-river and inspect them for presence or absence of coded-wire tags that were applied in spring 2006. These efforts, in conjunction with survey counts and sampling of the marine fisheries will provide annual estimates of escapement, smolt abundance, harvest distribution, survival, and timing.	ADF&G, Sport Fish Division	9/1/07	11/30/08	$67,553	Southeast
45761	Nakwasina River Coho Coded-Wire Tag Project	2006	In 1998 Nakwasina River coho salmon were chosen to provide an index of area-wide stock status for Northern Southeast outside waters of Southeast AK. In the spring of 2008, a crew of one biologist and two technicians will capture coho salmon smolt and administer coded-wire tags. This project provides quantitative stock assessment data through the use of coded-wire tags and subsequent adult recoveries in the marine fisheries and freshwater escapement. This project provides annual estimates of smolt abundance, harvest distribution, escapement, exploitation, survival, and timing.	ADF&G, Sport Fish Division	4/1/08	9/30/08	$24,257	Southeast
45762	Biologist in Training at Auke Weir	2006	The main objective of this project is to provide salary costs for a biologist to be trained by the PI to maintain and continue all facets of Auke Creek Weir operations including tagging, fish processing, data collection, and preliminary analyses and reporting of data.	National Marine Fisheries Service, Auke Bay Lab (NMFS, ABL)	3/1/07	9/30/08	$68,810	Southeast
45763	Southeast Alaska Salmon Information System	2006	This project will continue developing the Information System that was initiated in 2001 to develop access and management of salmon-related information to improve our ability to conduct assessments and analyses, retrieve reliable and repeatable data, and evaluate information that improves our overall ability to make more informed decisions as managers and researchers.	ADF&G, Sport Fish Division	7/1/07	6/30/08	$85,352	Southeast
45764	Situk River Weir	2006	This project will count adult sockeye and Chinook salmon passing the Situk River Weir from June 10 to August 15, 2007. It will estimate the annual escapement of sockeye salmon into the Situk River using mark-recapture methods and observer counts, as well as describe the age, length, and sex composition of sockeye and Chinook salmon. The project will also count the number of pink, jack Chinook, steelhead, chum, and coho salmon passing the weir June 10-August 15.	ADF&G, Commercial Fisheries Division	6/10/07	8/15/07	$40,891	Southeast
45765	Hydrologic and Adjudication Support - Year 2	2006	The goal of this project is to continue to provide the Department of Natural Resources with funding to support a hydrologist to assist with the adjudication of existing and future instream flow reservation applications and provide hydrologic technical support for salmon producing water bodies in Southeast AK.	ADF&G, Sport Fish Division	7/1/07	6/30/08	$38,684	Southeast
45766	Instream Flow Quantification and Protection - Year 2	2006	The main goal of this project is to quantify and protect instream flow requirements for priority salmon-producing water bodies in Southeast AK, and hence continue the efforts of AKSSF project 45213 for one more year. Priority water bodies were identified during the AKSSF Instream Flow Needs project (45040) and will be updated by this project. Preparing instream flow reservation applications will be the primary tool used to protect instream flows needed to sustain production.	ADF&G, Sport Fish Division	7/1/07	6/30/08	$235,844	Southeast
45767	Mainland Rivers Watershed Project - Year 1	2006	Funding of the Mainland Rivers Watershed project will allow us to proceed with the development of tools and protocols that will collect important baseline landcover information for important mainland river systems; advance our ability to incorporate habitat information with existing stock assessment programs and begin evaluating ways to improve upon—or augment—existing escapement goal development approaches; and identify, monitor, and conserve/protect important spawning and rearing habitats in these highly productive systems.	ADF&G, Sport Fish Division	7/1/07	6/30/08	$76,767	Southeast
45768	Chilkat Lake Adult Sockeye Salmon Enumeration	2006	ADF&G will install the Chilkat Lake weir for the primary purpose of collecting information from returning adult Chilkat Lake sockeye salmon. The information collected will include examination of fish for marks applied from the lower Chilkat River fish wheel project, sampling the population for age, sex, and length and to collect the scale standards used to segregate the commercial gillnet catch by employing scale pattern analysis. The weir will also be operated to enumerate fish as they pass through and that information will be relayed to fishery management.	ADF&G, Commercial Fisheries Division	7/1/07	6/30/08	$101,352	Southeast
45769	Salmon Habitat Surveys in Lakes and Streams - Part 4	2006	This project will continue funding data collection and analyses necessary for building a landscape-based predictive model to be used as a tool in Genetic Stock Identification by resource managers and planners. The tool would be used as an objective approach for ensuring adequate protections of important salmon habitats during project planning stages.	ADF&G, Sport Fish Division	7/1/07	6/30/08	$239,447	Southeast

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FFY 2000-2010

Current to September, 2011

Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45770	Chilkat River Drainage Salmon Stock Assessment - Year 1	2006	This project provides personnel to run the fish wheel project from July 1, 2007 through the end of fiscal year 2008 (June 30, 2008). Project goals will include estimating the age, sex, and length composition and the total escapement of Chilkat Lake and Chilkat River mainstem sockeye salmon in 2007. We will also estimate the age, sex, and length composition of the Chilkat River drainage fall chum salmon return in 2007.	ADF&G, Commercial Fisheries Division	7/1/07	6/30/08	$109,447	Southeast
45771	Chilkoot Lake Sockeye Salmon Escapement	2006	The Chilkoot River weir is installed during the first week of June on an annual basis. Funding for basic weir operation is supported by General Fund allocations. This project will supplement existing funding to provide salaries for one additional crew member and extend the funding of three existing project personnel to mark sockeye salmon, to recapture fish on spawning grounds, and to complete data analysis and reporting.	ADF&G, Commercial Fisheries Division	7/1/07	6/30/08	$42,100	Southeast
45772	Southeast Alaska Subsistence Sockeye Assessments - Year 1	2006	Our primary goal with this project is to measure the spawning population size in four sockeye salmon runs that support important subsistence fisheries for the Southeast AK villages of Kake, Angoon, Klawock, and Hydaburg. The AKSSF portion of this project funds professional biologists who will oversee and manage these projects. Our intent with this effort is to be able to make definitive statements about the status of these small sockeye stocks. To the extent that we may find the status of these stocks unfavorable, we will make appropriate recommendations to the fishery managers.	ADF&G, Commercial Fisheries Division	7/1/07	3/31/09	$147,492	Southeast
45773	DNR: Road Condition/Fish Passage Monitoring - Year 2	2006	This project will identify structures that do not provide efficient fish passage for salmon and will assist in prioritizing these structures for remediation or restoration. An initial prioritized list of restoration projects will be developed based on factors such as the amount and quality of habitat upstream of the structure, the cost of restoration, logistics, and other factors. This list will provide a basis for proposing fish passage restoration projects and assisting in watershed assessments under the Annual Salmon Habitat Assessment and Alaska Clean Water Actions until an integrated restoration/rehabilitation prioritization process and program are developed and funded.	Department of Natural Resources, Division of Forestry (DNR)	4/1/07	6/30/08	$139,053	Southeast
45774	Chuck Creek Coho Coded-Wire Tag and Escapement Weir - Year 2	2006	This project will provide an estimate of the marine harvest and distribution, marine survival, exploitation rate, smolt production, and adult escapement of Chuck Creek coho salmon. This stock is the only indicator stock in the southwest quadrant of Southeast AK.	ADF&G, Sport Fish Division	7/1/07	6/30/08	$41,709	Southeast
45776	Genetic Analysis of Wild Coho Before and After Local Enhancement	2006	This project has two objectives: (1) collect coho samples from Sashin Creek, Nakvassin Creek, Deer Lake, and Port Armstrong; and (2) determine if available coho ingle nucleotide polyphism's and microsatellite markers have sufficient power to delineate between Sashin Creek and Nakvassin Creek coho populations. This project will help assessing the ecological impacts of enhancement, specifically the genetic influence of large-scale enhancement on nearby wild populations.	National Oceanic and Atmospheric Administration	4/1/07	5/31/08	$26,175	Southeast
45782	Ford Arm Lake Coho and Sockeye - Year 2	2006	This project continues research on a long-term coho salmon indicator stock north of Sitka, and monitoring of an important subsistence sockeye population. This project is a continuation of AKSSF project 45452.	ADF&G, Commercial Fisheries Division	7/1/07	6/30/08	$70,302	Southeast
45783	Evaluation of Regional Chum Survival	2006	This project will develop a database of hatchery marine survivals and regional catches of Southeast AK chum salmon and compare interannual variations to both a long-term time series of environmental parameters and a short-term time series (10 yr) of fine scale data associated with juvenile chum salmon and their early marine conditions. These fine scale data include stock-specific indexes of juvenile salmon abundance, size, and condition based on otolith thermal marks. The marine survivals will be used as a tool to evaluate local, regional, and basin-scale (Gulf of Alaska) effects of environmental variation on the interannual variability of this important salmon fishery in Southeast AK.	National Marine Fisheries Service, Auke Bay Lab (NMFS, ABL)	9/1/07	12/31/09	$31,346	Southeast
45784	Otolith Marking at Gunnuk Creek Hatchery	2006	This project is designed to provide information critical to fisheries managers and provide better quantification of contributions to common property fisheries. The project will provide management with the ability to thermally mark otoliths for chum (and possibly coho) production. This will provide hatchery personnel and ADF&G management staff with a valuable tool for tracking returns through interception fisheries to ensure broodstock needs are met.	Kake Nonprofit Fisheries Corporation, Gunnuk Creek Hatchery	4/15/07	6/30/08	$89,701	Southeast
45789	Taku Sockeye Population Assessment	2006	The Taku River produces a major run of sockeye salmon that is managed jointly by ADF&G and the Department of Fisheries and Oceans Canada (DFO). Inseason and post-season estimates of their abundance are needed to fulfill the spawning escapement goal requirement for stocks specified by the U.S./Canada Pacific Salmon Treaty (PST). This project will use mark-recapture methods to calculate and assess the sockeye population returning to Canadian portions of the river.	ADF&G, Commercial Fisheries Division	4/16/10	6/30/10	$27,753	Southeast

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FFY 2000-2010

Current to September, 2011

Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45790	Southern Alaska Chum Baseline	2006	This project will provide laboratory analysis of approximately 10,000 archived chum salmon samples from the southeast portion of the chum salmon range (Central and Southeast Alaska, British Columbia, and Washington) to improve the representation of chum salmon from these regions in the coastwide genetic baseline. This information is necessary for developing genetic stock identification applications for local fisheries and to investigate potential effects of hatchery strays on wild populations. In addition, this information will complement the baseline data developed for the Western Alaska Salmon Stock Identification Project (WASSIP).	ADF&G, Commercial Fisheries Division	5/1/11	6/30/11	$286,091	Southeast
45791	SEAK Sockeye GSI	2006	This project will complete genetic stock identification (GSI) analysis on sockeye salmon tissues samples previously collected from commercial net fisheries in and near the Stikine and Alsek rivers in Southeast Alaska (SEAK). This analysis will focus on tissue samples from fishing districts 106, 108, and 182. An understanding of stock composition in these fisheries is important for sustainable management under the Pacific Salmon Treaty.	ADF&G, Commercial Fisheries Division	5/1/2011	6/30/11	$227,089	Southeast
45166 (700)	DEC: Fish Safety Monitoring - Phase 3	2006	This project will measure and monitor contaminant concentrations in Alaska salmon that could be contributing to a decline in some salmon populations and posing a risk to human health. Salmon in life stages from egg to spawning adult will be collected from sensitive species and populations around the state and analyzed for trace metals; contaminants containing chlorine or bromine; and, in some locations near urban centers, personal care products and prescription drug residues. A select number of resident fresh water fishes will be sampled and analyzed to evaluate the fresh water salmon habitat where fry and smolts are raised. ADF&G and the United States Fish and Wildlife Service will be provided with the data for their evaluation of the impact on salmon health while the Alaska Department of Health and Human Services, Division of Public Health, will screen the results to identify elevated levels relative to public health guidelines. *This project continues work begun in AKSSF projects 45255 and 45636.*	Department of Environmental Conservation, Division of Environmental Health (DEC)	4/1/10	3/31/11	$1,173,001	Southeast
45321	Salmon Aerial Surveys – Year 5	2007	This project will continue ADF&G's salmon aerial survey program, funding additional aerial surveys to monitor salmon escapements in SE AK. The program will maintain the number of systems surveyed and the frequency of aerial surveys during peak spawning times, and increase the opportunity to fly repeated aerial surveys by different individuals, thereby providing data for developing observer calibration correction factors for new surveyors in order to standardize pink salmon escapement survey data for observer counting bias. *This project continues work begun in AKSSF projects #45214, #45472, #45712, and #45820.*	Division of Community & Regional Affairs (DCRA)	7/1/09	06/30/10	$102,557	Southeast
45322	NBTBR Sockeye Port Sampling	2007	This project will collect weekly samples of between 520 to 800 scales and associated biological data from commercially caught sockeye salmon in each of the District 101, 106, 108, and 111 drift gillnet fisheries, the District 101-29, 102-80, 104, 105-41, 107-10, and 112 purse seine fisheries, and the District 182 set gillnet fisheries. Matched scale-tissue samples will be collected, allowing side-by-side stock identification analysis using both the scale pattern analysis (SPA) used in calculating the current treaty harvest sharing agreements and the new DNA based, single nucleotide polymorphism (SNP) techniques.	ADF&G, Commercial Fisheries Division	7/1/09	06/30/10	$175,197	Southeast
45323	N. Boundary Sockeye Dist. 101/4	2007	This project will continue an ongoing study to allow for the genetic analysis of 6,000 sockeye samples from the 2009 District 101 gillnet and the District 104 purse seine fisheries using the 45 SNP baseline developed by ADF&G. These are high priority fisheries with significant boundary issues. The purpose of this analysis is to determine the proportion of sockeye harvested from the 101 and 104 fisheries that originate from the Nass, Skeena, and Southeast Alaska regions.	National Oceanic and Atmospheric Administration	7/1/09	11/30/11	$207,545	Southeast
45326	Instream Flow Protection - Phase 6	2007	The main goal of this project is to quantify and reserve instream flows for priority salmon-producing waterbodies in SE AK. Priority waterbodies were identified during the*AKSSF project 45040 (Instream Flow Needs)* and will be updated by this project. Preparing reservation of water applications will be the primary tool used to protect instream flows needed to sustain salmon production. *This project continues and expands upon work begun in AKSSF projects 45040, 45107, 45213, 45766 and 45822.*	ADF&G, Sport Fish Division	9/15/09	3/31/12	$535,110	Southeast
45327	CTC Biometrician II - Year 4	2007	This project will continue to fund a Biometrician II to perform biometrical analyses, statistical analyses, and mathematical modeling to aid in the implementation of the Pacific Salmon Treaty (PST) and to aid in the management of Chinook salmon fisheries in Southeast Alaska (SE AK). *This project continues work begun in AKSSF projects 45634, 45707, and 45830.*	ADF&G, Commercial Fisheries Division	12/1/09	6/30/10	$41,411	Southeast

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FFY 2000-2010

Current to September, 2011

Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45814	Parentage of Supplemented Sockeye - Year 1	2007	This project is a feasibility study of an evaluation of the genetic effect of sockeye wild stock supplementation in a model system in which part of a wild spawning population is spawned artificially, cultured in a hatchery, reared in captivity, and released into the lake as fry. Ultimately, an evaluation through parentage analysis of reproductive success of fish produced artificially for wild stock supplementation, which would require repeated intense genotype surveys of the naturally spawning wild population and which would allow detection of the presence of salmon produced by wild stock supplementation and of their offspring.	University of Alaska Fairbanks, School of Fisheries and Ocean Sciences (UAF, SFOS)	7/1/08	9/30/09	$15,000	Southeast
45815	Salmon Habitat Prediction Model	2007	This project will fund data collection and analyses necessary for validating and ground-truthing the landscape-based predictive model (developed during earlier phases) to be used as a tool in Geographic Information System (GIS) by resource managers and planners. The tool would be used as an objective approach for ensuring adequate protections of important salmon habitats during project planning stages by providing a level of confidence associated with the probability that a given area (e.g., watershed, sub-basin, stream reach) is likely to contain anadromous fish.	ADF&G, Sport Fish Division	7/1/08	3/31/11	$166,753	Southeast
45816	Auke Creek Salmonid Monitoring - Year 3	2007	This project will continue research on coho salmon as a long-term indicator stock in a mainland lake system near Juneau by providing support for a weir technician to help operate and maintain Auke Creek Weir for continuous monitoring of downstream and upstream migrations of all salmonids. It will also continue associated research on long-term sockeye, pink and chum salmon populations from the Auke Creek system.	National Oceanic and Atmospheric Administration	7/1/08	6/30/09	$41,721	Southeast
45817	Mark Tag and Age Lab Support - Year 2	2007	Coded-wire tag (CWT) data is used to estimate marine harvests, total production, and to develop databases to support development of escapement goals, as well as to monitor compliance with Pacific Salmon Treaty (PST) obligations. The accurate and timely processing of CWTd salmon supplies data necessary to manage salmon fisheries and gain better understanding of salmon stocks.	ADF&G, Commercial Fisheries Division	7/1/08	6/30/09	$76,696	Southeast
45818	Nothern Boundary/Transboundary Rivers Sockeye Stock ID - Year 1	2007	Scale samples will be analyzed to estimate the weekly catch of Alaskan Nass, Skeena, Fraser, Stikine, and Taku River sockeye salmon caught in each of the District 101, 106, 108, and 111 drift gillnet fisheries and the District 101, 102, 103, and 104 purse seine fisheries. The resulting data will be used, in conjunction with stock identification data from Canadian fisheries and escapement counts, to estimate the total return of each stock and the percentage of that total return caught in fisheries with treaty-based harvest-sharing agreements.	ADF&G, Commercial Fisheries Division	7/1/08	6/30/09	$247,601	Southeast
45820	Salmon Aerial Surveys - Year 4	2007	This project seeks to extend the existing PCSRF salmon aerial survey project by one year. Aerial surveys form the backbone of the pink salmon stock assessment program in SE AK and are important for monitoring returns of chum salmon as well. Aerial surveys are also a primary assessment method for monitoring sockeye and coho salmon escapements in several streams in the Yakutat area. This project will fund additional aerial surveys to monitor salmon escapements in SE AK and Yakutat. *This project continues work begun in earlier AKSSF projects 45214, 45472 and 45712.*	ADF&G, Commercial Fisheries Division	7/1/08	6/30/09	$110,888	Southeast
45821	Chilkat River Fish Wheel - Year 2	2007	This project will provide personnel to run the fish wheel project from July 1, 2008, through the end of FY09 (June 30, 2009). Project goals will include estimating the age, sex, and length (ASL) composition and the total escapement of Chilkat Lake and Chilkat River mainstem sockeye salmon in 2008. PI will also estimate the ASL composition of the Chilkat River drainage fall chum salmon return in 2008 and estimate the abundance of these stocks by indexing the fish wheel catch of this species.	ADF&G, Commercial Fisheries Division	7/1/08	6/30/09	$113,501	Southeast
45822	Instream Flow Quantification - Year 3	2007	The goal of this project is to quantify and protect instream flow requirements for priority salmon-producing water bodies in SE AK. Priority waterbodies were identified during the AKSSF Instream Flow Needs Project (45040) and will be updated by this project. Preparing instream flow reservation applications will be the primary tool used to protect instream flows needed to sustain production. *This project will continue and expand upon the AKSSF Project 45766.*	ADF&G, Sport Fish Division	7/1/08	6/30/09	$239,563	Southeast
45823	Streamflow Models Analysis in SE AK	2007	This project will create a user-friendly comparison of real and modeled streamflow values intended to be used as a tool for fisheries and water resource managers. To reach this goal, a comprehensive evaluation of existing hydrologic models in SE AK compared to current USGS streamflow records will be undertaken to quantify the accuracy and precision of models in predicting flow characteristics for gaged watersheds.	Juneau Watershed Project	7/1/08	6/30/09	$42,929	Southeast
45824	McDonald Lake Sockeye GSI - Year 2	2007	This project will complete genetic stock identification (GSI) analysis on sockeye salmon tissue samples collected from commercial net fisheries in SSE AK. The analysis will be focused on tissue samples collected in three fishing areas: 106-30, 106-41, and 101-29 (Gravina Island purse seine). *Year 2 continues work begun in AKSSF project #45720.*	ADF&G, Commercial Fisheries Division	7/1/08	6/30/09	$122,084	Southeast

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45826	Hydrologic and Adjudication Support - Year 3	2007	The purpose of this project is to continue to provide DNR with funding to support a hydrologist to assist with the adjudication of existing and future ADF&G instream flow reservation applications and provide hydrologic technical support for salmon producing waterbodies in SE AK. This project will help DNR and ADF&G implement the MOU for improving administrative processing of applications on a timely basis and provide hydrologic assistance for water quantity and quality issues related to anadromous waterbodies in SE AK. *This project continues hydrologic and adjudication support begun in AKSSF projects 45213 and 45765.*	ADF&G, Sport Fish Division	7/9/08	12/31/09	$14,746	Southeast
45827	SE AK Troll Logbook Program 2008	2007	The project will fund the cost of conducting a troll logbook program in SE AK during the 2008 summer troll period from 7/1/08 through 9/30/08, as well as entering of the logbook data into a database during October of 2008. The logbooks will collect information on salmon catch, effort, and encounters, as well as provide a record of biological information that will be paired with Chinook GSI samples taken during this same time frame.	ADF&G, Commercial Fisheries Division	7/1/08	10/31/08	$15,667	Southeast
45828	ADNR Road Condition/Fish Passage Monitoring - Year 3	2007	This project will collect field data to monitor forest practices related to fish habitat, particularly construction, maintenance, and closure of roads. Survey results will be used to identify and prioritize fish passage restoration efforts, and identify and prioritize implementation of Best Management Practices related to road construction and road maintenance necessary for protection of salmon habitat.	Alaska Department of Natural Resources (DNR)	7/1/08	6/30/10	$120,690	Southeast
45829	Southeast Chinook Age, Sex, Length - Year 3	2007	This project will improve annual assessments of escapements, fishery impacts, and survival by providing age, sex, and length composition information for Chinook salmon in the King Salmon, Blossom, and Keta rivers and Andrew Creek. It will also provide improved databases of production by brood year to use in estimating new escapement goals for these Chinook salmon stocks. *This project continues work begun in AKSSF projects 45449 and 45610.*	ADF&G, Sport Fish Division	9/1/08	6/30/09	$61,336	Southeast
45830	CTC Biometrician II - Year 3	2007	This project will continue to fund a Biometrician II to perform biometrical analyses, statistical analyses, and mathematical modeling to aid in the implementation of the Pacific Salmon Treaty (PST) and to aid in the management of Chinook salmon fisheries in Southeast Alaska (SE AK).	ADF&G, Commercial Fisheries Division	7/1/08	3/31/10	$86,555	Southeast
45831	Chilkat Smolt CWT - Year 3	2007	This project will improve biological escapement goals. Primary benefits should accrue to the terminal commercial, subsistence, and sport fishermen who depend upon the health of these resources for income, food, and recreation. These Chinook and coho stocks are the most important in the Lynn Canal, and hence the primary benefits should accrue to the Haines community. In addition, this stock contributes 20,000 to 85,000 coho salmon per year to outside troll fisheries and therefore, benefits coastal communities throughout SE AK.	ADF&G, Sport Fish Division	9/1/08	10/31/09	$107,201	Southeast
45832	Mainland Rivers Watershed - Year 2	2007	This project will continue efforts associated with the development and implementation of a research program aimed at assessing the relationship between salmonid production and freshwater habitats in the Taku River watershed. Application of tools and protocols that will advance our ability to incorporate salmonid habitat information with existing stock assessment programs and other sources of salmonid distribution/abundance/ productivity within the Taku River will be paramount to success. *Year 2 continues work begun in project #45767.*	ADF&G, Sport Fish Division	7/1/08	6/30/08	$89,010	Southeast
45833	SE AK Subsistence Sockeye Assessments - Year 2	2007	The primary goal of this project is to annually measure the sizes of the breeding stocks of sockeye salmon in four sockeye salmon populations that are major subsistence resource for Southeast Alaskan villages. Annual assessments of sockeye escapement, with auxiliary information such as age composition, subsistence harvest levels, and juvenile population sizes and condition, provide critical information to state and federal fisheries management staff. *This project continues work begun in AKSSF project #45772.*	ADF&G, Commercial Fisheries Division	10/1/08	2/15/10	$144,460	Southeast
45834	Chuck Creek Coho Escapement – Yr 3	2007	This project provides an estimate of the marine harvest and distribution, marine survival, exploitation rate, smolt production, and adult escapement of Chuck Creek coho salmon. Adult escapements have been successfully counted through a weir on Chuck Creek in 2001 through 2007. CWTs have been placed on 79% to 87% of coho smolt emigrating from Chuck Creek in 2002 to 2007, allowing for precise estimates of marine harvest and survival. *This project continues work begun in AKSSF projects 45457 and 45774.*	ADF&G, Sport Fish Division	2/1/09	6/30/09	$35,696	Southeast

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45835	Southeast Restoration Workshop	2007	This project funds a two-day Restoration Workshop (Workshop) for state and federal agencies, municipalities, watershed groups, non-profit organizations, conservation groups, contractors, and private consultants. The Workshop will provide essential fish life history and habitat educational information, a fish habitat restoration curriculum, and bio-technical restoration technique information. These educational outreach activities will compliment the efforts identified in the Juneau Restoration Cost Share Program, also funded through AKSSF. The Workshop will also restore approximately 50 feet of impacted fish habitat.	ADF&G, Sport Fish Division	5/1/09	6/30/09	$11,885	Southeast
45836	Stikine River Chinook CWT - Year 5	2007	This project will provide estimates of smolt abundance and harvest that, combined with estimates of escapement (funded through a separate study), will also provide estimates of total production, exploitation, and marine survival by brood year for Stikine River Chinook salmon. Results will be used to implement abundance based management for this stock, an obligation of Alaska in the 2008 PST Agreement. *This project continues work begun in AKSSF projects, #45109, #45451, #45612, and #45708.*	ADF&G, Sport Fish Division	7/1/09	6/30/10	$97,928	Southeast
45837	Southeast Chinook ASL – Year 4	2007	This project will improve annual assessments of escapements, fishery impacts, and survival by providing age, sex, length (ASL) composition information for Chinook salmon in the King Salmon, Keta, and Blossom rivers and Andrew Creek. It will also provide improved databases of production by brood year to use in estimating new escapement goals for these Chinook salmon stocks. *This project continues work begun in AKSSF projects #45449, #45610, and #45829.*	ADF&G, Sport Fish Division	7/1/09	6/30/10	$54,065	Southeast
45838	SEAK Coho Indicator Stocks	2007	This project funds the salaries for the Regional Salmon Research Biologist (Coho Project Leader), and Assistant Coho Project Biologist for the continuation of research on three long-term coho salmon indicator stocks in Southeast Alaska, and coho escapement surveys in the Ketchikan area. The three coho indicator systems include the Berners River near Juneau, Ford Arm Lake north of Sitka, and Hugh Smith Lake southeast of Ketchikan.	ADF&G, Commercial Fisheries Division	7/1/09	6/30/10	$102,060	Southeast
45839	Chickamin River Chinook	2007	This project will provide for sampling of the Chinook salmon escapement in the Chickamin River drainage for one year to obtain information on age, sex, and length (ASL) composition and the marked fraction of coded wire tagged (CWTd) fish. The data from this project will enable ADF&G to estimate total harvest, harvest distribution, exploitation rates, smolt production, and marine survival. This data will also be used in run reconstruction estimation, which in turn is necessary to update the biological escapement goal (BEG) for this stock. Data from this project will also be used by the Chinook Technical Committee (CTC) for: (1) development of a model stock for southern SEAK, (2) exploitation rate analysis of this wild stock, and (3) improved escapement assessment for associated Behm Canal stocks.	ADF&G, Sport Fish Division	7/1/09	6/30/10	$89,378	Southeast
45840	Southeast Restoration Cost Share	2007	The Southeast Cost Share Project is a proactive financial incentive and educational outreach program that provides funding and technical project design assistance for public and private landowners to sustain and enhance valuable salmon habitat in Southeast Alaska. ADF&G will partner with USFWS and conduct a restoration program to rehabilitate and sustain fish habitat in watersheds of Central Alaska over a two year period.	ADF&G, Sport Fish Division	7/1/09	12/31/11	$100,809	Southeast
45841	NBTBR Sockeye Stock ID – Year 2	2007	Scale samples will be analyzed to estimate the weekly catch of Alaskan Nass, Skeena, Fraser, Stikine, and Taku River sockeye salmon caught in each of the District 101, 106, 108, and 111 drift gillnet fisheries and the District 101, 102, 103, and 104 purse seine fisheries. The resulting data will be used, in conjunction with stock identification data from Canadian fisheries and escapement counts, to estimate the total return of each stock and the percentage of that total return caught in fisheries with treaty-based harvest-sharing agreements. *This project continues work begun in AKSSF project #45818.*	ADF&G, Commercial Fisheries Division	7/1/09	6/30/100	$353,047	Southeast
45842	Situk Weir Chinook-Sockeye	2007	ADF&G, Commercial Fisheries Division, will count all species of salmon at the Situk River Weir from July 1, 2009 through August 15, 2009. These counts will be used to manage the Situk-Ahrnklin Inlet set gillnet fishery, the sport fishery, and the subsistence fisheries to ensure escapement objectives are met. The database of biological sampling of sockeye and Chinook salmon for ASL will also be maintained as a result.	ADF&G, Commercial Fisheries Division	7/1/09	6/30/10	$33,022	Southeast
45844	Taku River Smolt and Escapement – Year 3	2007	This project will sample returning adult coho salmon on the Taku River for the presence of coded wire tags (CWTs) using fish wheels and set gillnets operated near Canyon Island in the lower Taku River in 2009. At the same time, adults are tagged as part of a two-event mark-recapture study to estimate the inriver abundance and sampled for age, sex, and length composition data; a short distance upriver, in Canada, adults are inspected for tags in the commercial gillnet fishery. This project will also CWT coho salmon smolt as they emigrate from the Taku River in the spring of 2010 for future research. *This project continues work begun in AKSSF projects #45023 and #45464.*	ADF&G, Sport Fish Division	7/1/09	6/30/10	$62,316	Southeast

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45845	Chilkat River Smolt CWT – Year 4	2007	This project will CWT Chinook and coho salmon smolt emigrating from the Chilkat River in the spring of 2010. Data from this project will be used to document the subsequent distribution of the tagged fish in marine harvests in 2011 (coho) and 2011-2015 (Chinook), funded separately through existing ADF&G port-sampling programs. *The project continues the work in AKSSF projects #45621, #45705, and #45831.*	ADF&G, Sport Fish Division	11/1/09	6/30/10	$95,311	Southeast
45318 (800)	Chilkat Chinook-Coho CWT	2007	This project will coded wire tag (CWT) Chinook and coho salmon smolt in spring 2011 and Chinook salmon juveniles in fall 2011 on the Chilkat River. This information will allow estimation of the annual age composition, CWT fraction, freshwater production, marine harvest, and fresh- and saltwater survival parameters by brood year for these stocks. *This project continues work begun in AKSSF projects 45845, 45621, 45705, 45831, and 45958.*	ADF&G, Sport Fish Division	9/1/10	12/31/11	$163,929	Southeast
45319 (800)	Mark, Tag, and Age Lab Support – Year 5	2007	This project will process up to 25,000 coded wire tags (CWTs) and up to 28,000 otoliths at the ADF&G Mark, Tag, and Age Lab (MTA). This information will provide accurate and timely recovery and reporting of salmon tag and mark data that are central to in-season management of Southeast Alaska salmon fisheries and will assist managers in maintaining a thorough understanding of salmon stock distributions and relative abundances. This project continues work begun in AKSSF projects 45710, 45817, 45843, and 45962.	ADF&G, Commercial Fisheries Division	7/1/11	3/31/12	$87,584	Southeast
45324 (800)	SE AK Chinook GSI Sampling Archiving	2007	This project will extend sample collection for genetic stock identification (GSI) of Chinook salmon harvested or encountered in the commercial troll and sport fisheries and for the directed drift gillnet harvests in Southeast Alaska (SE AK).	ADF&G, Commercial Fisheries Division	10/1/09	9/30/10	$44,246	Southeast
45325 (800)	Klawock Causeway Fish Passage	2007	This project will re-establish fish passage and high-tide flow exchange through the earthen causeway that provides the foundation for the Klawock–Hollis highway across the eastern portion of Klawock Bay by installing a concrete box culvert.	Klawock Cooperative Association (KCA)	10/28/09	3/31/12	$165,866	Southeast
45328 (800)	ACWA Grants DEC – Year 5	2007	This project provides funds for the Alaska Clean Water Actions (ACWA) program, a joint effort of the Alaska Department of Natural Resources (DNR), Alaska Department Environmental Conservation (DEC), and ADF&G. Three projects on priority water bodies will receive funds for ongoing projects. Takshanuk Watershed Council will conduct stream gauging on Sawmill Creek and Onemile (Holgate Creek) near Haines to gather data for ADF&G to file instream flow reservations, and the City and Borough of Sitka will continue to improve and evaluate the water quality of Granite Creek. *This project continues work begun in AKSSF projects 45282, 45737, 45813, and 45945.*	ADF&G, Sport Fish Division	7/1/10	6/30/11	$51,500	Southeast
45330 (800)	Salmon Habitats Taku River – Yr 2	2007	This project will identify and assess salmonid distribution patterns and freshwater habitats within the U.S. portion of the Taku River watershed by conducting multi-season (spring, summer, and fall) and multi-year (n = 2) sampling events to identify habitats used by salmonids. This work will expand the coverage of the Anadromous Waters Catalog (AWC) as well as collect hydrological and biological data relevant to habitat protection on the Taku River, known to be a keystone salmonid production system. *This project continues work begun in AKSSF project 45951.*	ADF&G, Sport Fish Division	7/1/10	6/30/11	$153,140	Southeast
45843	Mark Tag and Age Lab Support - Year 3	2008	Coded wire tag (CWT) data is used to estimate marine harvests, total production, and to develop databases to support development of escapement goals, as well as to monitor compliance with Pacific Salmon Treaty obligations. The accurate and timely processing of CWTd salmon supplies data necessary to manage salmon fisheries and gain better understanding of salmon stocks. This project funds seasonal technicians performing dissections and processing CWTs at the ADF&G Tab Lab and otoliths at the ADF&G Thermal Mark Lab and *continues work begun in AKSSF projects #45710 and #45817.*	ADF&G, Commercial Fisheries Division	7/1/09	6/30/10	$77,250	Southeast
45945	ACWA Grants DEC – Year 4	2008	This project will provide continued funding for (Alaska Clean Water Actions) ACWA-related activities (stewardship, monitoring, protection, recovery) on anadromous water bodies in Southeast Alaska that have been identified as high priority through the ACWA interagency process. Agencies and members of the public may register concerns about a water body by "nominating" it for attention. *This project continues work begun in AKSSF projects 45282, 45737, and 45813.*	ADF&G, Sport Fish Division	7/1/09	6/30/10	$51,500	Southeast
45946	Effects of Hatchery Strays on Wild Chinook Salmon	2008	This project is an experiment designed to help clarify some of the potential genetic impacts of hatchery Chinook salmon on wild Chinook salmon by simulating reproduction in the wild between hatchery and wild origin fish using a laboratory environment to create specific combinations.	National Oceanic and Atmospheric Administration	7/1/09	11/30/11	$102,955	Southeast
45947	Disappearance Creek Chum Weir - Yr 2	2008	This project will monitor the escapement of fall chum salmon at Disappearance Creek (one of the primary chum salmon systems in Cholmondeley Sound) for one year and compare the project escapement estimate to aerial and foot survey estimates conducted by ADF&G personnel during the peak of the run.	ADF&G, Commercial Fisheries Division	7/1/09	6/30/10	$106,529	Southeast

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45948	Auke Creek Salmonid Population Monitoring – Yr 4	2008	This project will continue research on coho salmon as a long-term indicator stock in a mainland lake system near Juneau by providing support for a weir technician to help operate and maintain Auke Creek Weir for continuous monitoring of downstream and upstream migrations of all salmonids. It will also continue associated research on long-term sockeye, pink, and chum salmon populations from the Auke Creek System. *This project continues work begun in AKSSF projects #45605, 45738, and 45816.*	National Oceanic and Atmospheric Administration	7/1/09	6/30/11	$86,726	Southeast
45949	McDonald Lake Sockeye GSI - Year 3	2008	This project will complete genetic stock identification (GSI) analysis on sockeye salmon tissue samples collected from commercial net fisheries in SSE AK to provide information on migratory pathways and timing of McDonald Lake sockeye. The analysis will be focused on tissue samples collected in three fishing areas (106-30, 106-41, and 101-29). *This project continues work begun in AKSSF projects 45720 and 45824.*	ADF&G, Commercial Fisheries Division	7/1/09	6/30/10	$132,380	Southeast
45950	Chickamin Coho Escapement - Year 4	2008	In fall 2009, adult coho will be inspected inriver for the presence or absence of an adipose fin to estimate the marked fraction of smolt coded-wire tagged in spring 2008. Age, sex, and length data will also be collected. The escapement will be estimated through expansion of the peak aerial survey count. *This project continues work begun in AKSSF projects 45627, 45706, and 45819.*	ADF&G, Sport Fish Division	7/1/09	6/30/10	$60,449	Southeast
45951	Salmon Habitats of the Taku River	2008	This project will continue efforts to identify and assess relationships between juvenile salmonid distribution patterns and freshwater habitats in the Taku River watershed. *This project continues work begun in AKSSF projects 45767 and 45832.*	ADF&G, Sport Fish Division	7/1/09	6/30/10	$147,460	Southeast
45952	Chilkat Fishwheel Stock Assessment – Yr 3	2008	This project funds the operation of two fish wheels to capture returning salmon in the lower Chilkat River. Salmon are captured to collect age, sex, length, and other biological information. All healthy adult sockeye salmon are tagged as part of a mark-recapture program used to estimate the inriver abundance of Chilkat River mainstem sockeye salmon. The information gathered by this project will assist fishery managers in efforts to effectively manage the fishery resource to assure adequate escapements are met.	ADF&G, Commercial Fisheries Division	7/1/09	6/30/10	$269,860	Southeast
45953	Nakwasina River Coho Escapement – Yr 5	2008	In fall 2009, adult coho will be inspected in the Nakwasina River for the presence or absence of an adipose fin to estimate the marked fraction of smolt coded wire tagged in spring 2008. Age, sex, and length data will also be collected. The escapement will be estimated through expansion of the peak foot survey count.	ADF&G, Sport Fish Division	7/1/09	6/30/10	$40,000	Southeast
45954	Chuck Creek Coho Escapement Weir - Yr 4	2008	This project provides an estimate of the marine harvest and distribution, marine survival, exploitation rate, smolt production, and adult escapement of Chuck Creek coho salmon by recovering coded wire tags from marine harvests and counting the coho escapement through the Chuck Creek weir. *This project continues work begun in AKSSF projects #45457, #45774, and #45834.*	ADF&G, Sport Fish Division	7/1/09	12/30/10	$79,826	Southeast
45955	Stress Effects & Mass-Marking in Salmon	2008	This project will examine the effects of hatchery-induced stress on larval fish physiology and development using physiological parameters (blood and whole body cortisol levels) and physical responses (growth rate, length, weight, mortality rate, and otolith morphology) to measure immediate and long-term responses and consequences to stress exposure to provide an evaluation of hatchery production protocols. This project will also evaluate the feasibility of using cortisol concentrations to identify and eliminate potentially problematic stress exposure before it affects fish development and will examine how these stressors affect otolith morphology to determine if any of them alter an otolith's ring structure in such way that it could be used to create unique otolith marks without significant adverse effects.	ADF&G, Commercial Fisheries Division	7/1/09	6/30/12	$90,501	Southeast
45956	SECM Sampling & Pink Forecasting	2008	This project will develop a forecast model to provide resource managers with a reliable pre-season forecast estimate of adult pink salmon returns in SE AK by sampling migrating juvenile pink salmon and their associated environmental conditions. These juvenile pink salmon, which have resided in the coastal ocean for some two-three months, are sampled along migration corridors while en route to the Gulf of Alaska.	National Oceanic and Atmospheric Administration	7/15/09	3/31/11	$55,620	Southeast
45957	Parentage of Supplemented Sockeye – Yr 2	2008	This project is the second phase of an evaluation of sockeye supplementation designed to determine the feasibility of parentage analysis as a method of observing effects of supplementation on fitness. This project uses a model sockeye population in a single lake system to conduct a study of supplementation. This phase of the project will perform genetic analysis on the wild population of sockeye in Auke Lake and develop a design for an implementation of supplementation study. *This project continues work begun in AKSSF project #45814.*	University of Alaska Fairbanks, School of Fisheries and Ocean Sciences (UAF, SFOS)	7/23/09	9/30/11	$167,371	Southeast

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45958	Chilkat River Smolt CWT - Year 4	2008	This project will CWT Chinook and coho salmon smolt emigrating from the Chilkat River in the spring of 2010. Data from this project will be used to document the subsequent distribution of the tagged fish in marine harvests in 2011 (coho) and 2011-2015 (Chinook), funded separately through existing ADF&G port-sampling programs. *This project continues work begun in AKSSF projects 45621, 45705, and 45831.*	ADF&G, Sport Fish Division	11/1/09	6/30/10	$108,065	Southeast
45959	Haines Salmon Habitat Assessment - Year 2	2008	TWC will expand on previous work cataloging and characterizing streams in the Haines Borough and use geographic information systems (GIS) technology to map salmon distributions. This project seeks to protect freshwater salmon habitat by nominating streams for inclusion in the State of Alaska's *Catalog of Waters Important for the Spawning, Rearing or Migration of Anadromous Fishes* and its associated Atlas (AWC). This project will help to conserve and protect salmon habitat through TWC's gaining a broader understanding of the distribution and character of salmon habitat. *This project continues work begun in AKSSF project 45825.*	Takshanuk Watershed Council (TWC)	8/10/09	12/31/10	$30,432	Southeast
45960	Hydrologic & Adjudication Support - Yr. 4	2008	This project will continue to provide DNR with funding to support a hydrologist to assist with the hydrologic components of existing and future ADF&G reservation of water applications and provide hydrologic technical support for salmon-producing waterbodies in SE AK. This project will help DNR and ADF&G implement the MOU for improving administrative processing of applications on a timely basis and provide hydrologic assistance for water quantity and quality issues related to anadromous waterbodies in SE AK. *This project continues work begun in AKSSF projects 45040, 45107, 45626, 45765, and 45826.*	Cross-regional Aquatic Resources Coordination Unit (SARCU)	1/1/10	6/30/10	$15,038	Southeast
45965	Climate Change Impacts on Salmon	2008	This project will take advantage of more than three decades of data collected at Auke Creek, Alaska, to determine how climate change has affected run timing and habitat of several species of salmon important to commercial, sport, and subsistence harvests. The goals of this project are 1) to measure how climate change impacts salmonid migration timing and habitat, 2) to determine the specific freshwater habitat and oceanic environmental factors influencing pink salmon migration timing, and 3) to determine whether pink salmon are genetically adapting to climate change by shifting their migration timing. Understanding salmonid run timing and how it will change in the future is critically important to harvest management.	University of Alaska Southeast	3/1/11	11/30/12	$80,532	Southeast
45967	AWC Catalog Inventories in SE AK	2008	Alaska's prolific Pacific salmon provide abundant recreational and commercial opportunities that benefit a wide array of user-groups and are considered to be the foundation of a healthy ecosystem. The primary goal of this project is to expand the known distribution of anadromous habitat as officially recognized in the Anadromous Waters Catalog (AWC) by surveying and nominating streams for inclusion. The AWC is the state of Alaska's primary regulatory tool for protecting and conserving fresh waters inhabited by Pacific salmon and other anadromous fish.	ADF&G, Sport Fish Division	4/1/11	11/30/12	$269,309	Southeast
45968	Northern Tlingit Salmon Fishing	2008	This project will investigate changes in the patterns of wild salmon subsistence use by the Chilkat and Chilkoot Tlingit and research Chilkat and Chilkoot Tlingit traditional ecological knowledge and fishing practices. Improved documentation of subsistence harvests supports effective salmon management and is essential for the Alaska Board of Fisheries to meet its statutory mandate to provide reasonable opportunities for subsistence uses. Understanding trends in Haines area subsistence salmon fisheries, including factors influencing participation in the fishery and harvest levels, are critical for management of salmon populations and habitat issues.	Alaska Social Science Research (ASSR)	4/1/11	04/01/11	$59,111	Southeast
45969	Sitkoh Restoration Partnership	2008	This project will restore 1,800 feet of streambed in the Sitkoh River that has been destabilized from past logging practices. The stream channel morphology will be restored to its natural function and spawning and rearing habitat reestablished for pink salmon (Oncorhynchus gorbuscha), coho salmon (O. kitsuch), and steelhead (O. mykiss).	Sitkoh Restoration Partnership	4/14/11	6/30/12	$107,946	Southeast
45972	GSI of Taku River Sockeye Salmon	2008	This project will complete genetic stock identification (GSI) analysis on sockeye salmon tissue samples collected from commercial gillnet fisheries in areas in and near the Taku River in Southeast Alaska. This analysis will be focused on tissue samples collected in District 111 and on evaluating the potential for GSI to replace scale pattern analysis for stock estimates in transboundary rivers. An understanding of stock composition in these fisheries is important to meet harvest share agreements and for sustainable management under the Pacific Salmon Treaty (PST). *This project continues work begun in AKSSF project 45097.*	ADF&G, Commercial Fisheries Division	7/1/11	11/30/12	$135,969	Southeast

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45973	Salmon Aerial Surveys – Year 7	2008	Intensive monitoring of incoming run strength is required for successful abundance-based management of commercial salmon fisheries in Southeast Alaska. Aerial surveys are the primary assessment method used to monitor pink and chum salmon throughout the region and sockeye and coho salmon runs in the Yakutat Management Area. Fishery openings are targeted where surplus production to escapement goals are identified. This project will provide additional aerial surveys in order to maintain the number of systems surveyed and the frequency of aerial surveys during peak spawning times, and to increase the opportunity to fly repeated aerial surveys by different individuals to provide data for developing observer calibration correction factors when needed. *This project continues work begun in AKSSF projects 45214, 45472, 45712, 45820, 45321, and 45964.*	ADF&G, Commercial Fisheries Division	7/1/11	11/30/12	$241,885	Southeast
45974	NBTBR Sockeye Stock ID – Year 4	2008	This project will collect sockeye salmon scale and tissue samples from the Southeast Alaska commercial net fisheries and escapement systems. Scale and tissue samples will be analyzed to estimate the weekly catch of Alaska Nass, Skeena, Fraser, Stikine, Alsek, and Taku River sockeye salmon harvested in the Districts 101, 106, 108, and 111 drift gillnet fisheries; the District 182-30 set-net fishery; and the District 101, 102, 103, and 104 purse seine fisheries. The resulting data will be used in conjunction with stock identification data from Canada fisheries and escapement counts to estimate the total return of each stock and the percentage of that total return caught in fisheries with Pacific Salmon Treaty (PST) based harvest-sharing agreements. *This project continues work begun in AKSSF projects 45818, 45841, and 45963.*	ADF&G, Commercial Fisheries Division	7/1/11	11/30/12	$784,281	Southeast
45975	Hatchery Chum Straying - Yr 2	2008	In 2008, ADF&G initiated a project to collect baseline information from chum salmon index streams in Southeast Alaska in order to estimate the proportions of hatchery-produced chum salmon in samples from 44 (50%) of the 88 chum salmon index streams in the region. This project will ensure that adequate samples are obtained from the 44 streams identified in the baseline sampling and will provide additional data from a set of index streams in the Northern Southeast Inside Sub-region of Southeast Alaska. Documenting the presence or absence of hatchery strays in Southeast Alaska chum salmon streams is a critical first step in understanding the possible implications of hatchery straying on wild stock populations. *This project continues work begun in AKSSF project 45743.*	ADF&G, Commercial Fisheries Division	7/1/11	6/30/12	$75,731	Southeast
45976	Porcupine Area Salmon Assessment	2008	The Takshanuk Watershed Council (TWC) will conduct a salmon distribution assessment in the Klehini River watershed in and around the Porcupine Mining District near Haines. TWC will trap, count, and identify fish in local streams of importance in order to identify and nominate streams for the State of Alaska's Catalog of Waters Important for the Spawning, Rearing, or Migration of Anadromous Fishes and its associated Atlas (AWC). Listing in the AWC is an essential step to ensuring statutory protection of fish habitat. TWC will also gather water quality data for baseline information on anadromous streams as well as springs and ponds affecting these streams in the project area.	Takshanuk Watershed Council (TWC)	7/1/11	11/30/12	$48,948	Southeast
44545	Documenting Anadromous Waters N SEAK	2009	ADF&G uses the Catalog of Waters Important for Spawning, Rearing or Migration of Anadromous Fishes and its companion Atlas, known as the Anadromous Waters Catalog (AWC), to list water bodies considered important for use by anadromous fish. This project will conduct on-the-ground fieldwork necessary to correct the inaccuracies of the AWC in the alignment and fish use extent of most water bodies listed for Juneau, Haines, and Sitka. A water body listed in the AWC is afforded protection under State law.	ADF&G, Division of Sport Fish – RTS	5/1/10	6/30/13	$224,805	Southeast
44546	SE Hydro Adjudication Support – Yr 5	2009	This project will fund a DNR hydrologist for 4.5 months over three years to assist with the hydrologic components of existing and future ADF&G reservation of water applications under the Alaska Water Use Act (AS 46.15) and provide hydrologic technical support to ADF&G for salmon-producing waterbodies in Southeast Alaska. DNR and ADF&G will also implement a memorandum of agreement to improve processing of water reservations on a timely basis and provide hydrologic assistance for water quantity and quality issues related to anadromous waterbodies in Southeast Alaska. *This project continues work begun in AKSSF projects 45626, 45765, 45826, and 45960.*	Alaska Department of Natural Resources (DNR)	7/1/2010	6/30/13	$42,225	Southeast

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
44547	SE Subsistence Sockeye Assessment Ph 6	2009	This project will continue to assess and measure the breeding stock size of Kanalku Lake, one of the most heavily utilized sockeye salmon runs in Southeast Alaska. The goal of this assessment is to increase the amount and quality of information available to fishery managers. The project will also compile, maintain, and distribute information from databases, published reports, and other sources pertinent to all sockeye salmon stocks and fisheries in Southeast Alaska in support of management and conservation of these salmon resources. *This project continues work begun in AKSSF projects 45305, 45437, 45772, 45833, and 45961.*	ADF&G, Commercial Fisheries Division	7/1/2010	3/31/14	$186,500	Southeast
44548	SE AK Chinook Port Sampling – Pt 5	2009	Significant numbers of both hatchery and wild stock Chinook salmon have coded-wire-tags (CWTs) inserted into their heads before they are released from hatcheries or as they migrate to sea. This project will inspect landings of Chinook salmon for missing adipose fins (denoting the presence of a tag) and the heads of any marked fish will be collected and the tags decoded by ADF&G staff; genetic samples will also be collected and archived, and matching scale samples will be collected and processed at the ADF&G Douglas office. These tags, together with associated data collected by ADF&G port samplers, will allow managers to estimate the number and proportion that each hatchery or tagged wild stock contributes to Southeast Alaska fisheries. *This project continues work begun in AKSSF projects 45219, 45481, 45704, and 45324.*	ADF&G, Commercial Fisheries Division	7/1/2010	10/31/13	$241,587	Southeast
44549	SE AK Marine Harvest Monitoring	2009	Harvest and relative contributions of Chinook salmon stocks listed under the Endangered Species Act (ESA) in Ketchikan, Craig, and Sitka marine sport fisheries will be estimated in 2010, 2011, and 2012.	ADF&G, Sport Fish Division	7/1/2010	12/31/12	$497,950	Southeast
44550	Climate Change and Hydrology	2009	This project will develop a set of spatially-explicit tools for assessing the effects of climate change (i.e., estimated changes in temperature and precipitation) on specific hydrologic patterns important for reproduction and survival of salmon (e.g., patterns of streamflow). Investigators will use historic data on temperature, precipitation, and physical watershed characteristics to model current patterns of streamflow and will apply these relationships to predict future patterns under a range of projected climate scenarios. The final product will help resource managers assess watershed-specific vulnerability and develop potential monitoring and adaptation strategies.	The Nature Conservancy (TNC)	4/1/11	3/31/13	$72,411	Southeast
45722	DNR: Canadian Mine Review Phase 2	2006	The Coastal Range of British Columbia is a highly mineralized area that hosts multiple mineral deposits the development of which, because it is upstream from Alaska, has the potential for degrading Alaska waters and negatively impacting Alaska fisheries and wildlife resources. Mining projects and potential mining projects of current interest include Galore Creek, Tulsequah Chief Project, Schaft Creek, and others. This project will help protect Alaska's water quality and resources through review and comment on the permitting of Canadian mines by the State's experienced Large Mine Team under the direction of the Mining Coordinator in the Dept. of Natural Resources.	Department of Natural Resources, Alaska State Parks (DNR)	7/1/07	6/30/09	$65,423	Southeast
45811	Disappearance Creek Chum Weir - Year 1	2007	This project will monitor the escapement of fall chum salmon at Disappearance Creek (one of the primary chum salmon systems in the Sound) for three years, and compare our escapement estimates to aerial and foot survey estimates conducted by department personnel during the peak of the run.	ADF&G, Commercial Fisheries Division	5/7/08	6/30/09	$160,716	Southeast
45812	ACWA Program Support - Year 2	2007	This project will provide support for one ADF&G employee dedicated and instrumental to implementation of ADF&G responsibilities to the ACWA program. ACWA-funded projects improve watershed health, build capacity through outreach and public involvement, and have a positive impact on communities by improving water quality, and protecting and restoring aquatic resources.	ADF&G, Sport Fish Division	7/1/08	6/30/10	$3,500	Southeast
45813	ACWA Grants - Year 3 RSA to DEC	2007	Alaska Department of Environmental Conservation's ACWA program funds stewardship, monitoring, protection, and recovery activities related to anadromous water bodies in Southeast Alaska that have been deemed a high priority. AKSSF contributes to the ACWA program to support a competitive grant process that funds projects that restore, protect, or conserves water quality, quantity and aquatic habitat. This project provides support for one ADF&G employee dedicated to and instrumental to implementation of ADF&G responsibilities to the ACWA program.	ADF&G, Sport Fish Division	7/1/08	6/30/09	$49,972	Southeast
45962	Mark, Tag, & Age Lab Support – Yr. 4	2008	This project will fund seasonal technicians involved with hands-on dissection and processing of CWTs at the ADF&G Mark, Tag, and Age Lab (MTA Lab) and otoliths at the ADF&G Thermal Mark Lab. *This project continues work begun in AKSSF projects 45710, 45817 and 45843.*	ADF&G, Commercial Fisheries Division	7/1/10	6/30/11	$80,340	Southeast

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45963	NBTBR Sockeye Stock ID - Year 3	2008	This project will collect weekly samples of up to 520 scales and associated biological data from commercially caught sockeye salmon in each of the District 101, 106, 108, and 111 drift gillnet fisheries and the District 101, 102, 103, and 104 purse seine fisheries. Scale samples will be analyzed to estimate the weekly catch of Alaskan Nass, Skeena, Fraser, Stikine, and Taku River sockeye salmon caught in each of the fisheries. The resulting data will be used, in conjunction with stock identification data from Canadian fisheries and escapement counts, to estimate the total return of each stock and the percentage of that total return caught in fisheries with treaty-based harvest-sharing agreements. *This project continues work begun in AKSSF project 45818 and 45841.*	ADF&G, Commercial Fisheries Division	7/1/10	6/30/11	$383,833	Southeast
45964	Salmon Aerial Surveys – Year 6	2008	This project continues ADF&G's salmon aerial survey program, funding additional aerial surveys to monitor salmon escapements in SE AK. The program will maintain the number of systems surveyed and the frequency of aerial surveys during peak spawning times; it also increases the opportunity to fly repeated aerial surveys by different individuals, thereby providing data for developing observer calibration correction factors for new surveyors in order to standardize pink salmon escapement survey data for observer counting bias. *This project continues work begun in AKSSF projects 45214, 45472, 45712, 45820, and 45321.*	ADF&G, Commercial Fisheries Division	7/1/10	6/30/11	$111,607	Southeast
45966	SE AK Fish Passage Assessments	2008	This project will provide a comprehensive inventory and assessment of fish passage conditions on 417 miles of state road in Juneau, Haines, Skagway, Gustavus, and surrounding communities as part of an ongoing ADF&G effort to comprehensively inventory and assess fish passage barriers throughout Alaska. In addition to the inventory, ADF&G will also identify a subset of the highest priority crossing sites and offer recommendations for restoration of fish passage at each. The ultimate goal of the project is to increase interest, awareness, and funding for restoration of, or improvements to, fish passage through stream crossings within the project area.	ADF&G, Sport Fish Division	4/1/11	11/30/12	$160,209	Southeast
45805	CTC Biometrician II – Year 6	2007	This project will continue to fund a Biometrician II to perform biometrical analyses, statistical analyses, and mathematical modeling to aid in the implementation of the Pacific Salmon Treaty (PST) and to aid in the management of Chinook salmon fisheries in Southeast Alaska (SE AK). *Related AKSSF projects: 45368, 45707, 45830, 45327 (800), and 45734.*	ADF&G, Commercial Fisheries Division	6/1/11	6/30/12	$119,867	Southeast
45970	Haines Salmon Habitat Assessment – Year 3	2008	This project is a continuation of a salmon distribution assessment in the Chilkat, Chilkoot, and Ferebee watersheds. Takshanuk Watershed Council (TWC) will trap, count, and identify fish in local streams of importance in order to identify and nominate streams for inclusion in the State of Alaska's *Catalog of Waters Important for the Spawning, Rearing or Migration of Anadromous Fishes* and its associated Atlas (AWC). Listing in the AWC is an essential step to ensuring statutory protection of streams. By increasing the number of listed streams, the project will increase the protection and knowledge of salmon distribution and habitat. A secondary effort will be made to increase life-stage specific knowledge of habitat usage on streams currently catalogued simply as 'species present' as time and funding allows. *See related AKSSF projects 45825, 45959 and 45329 (800).*	Takshanuk Watershed Council	7/1/11	9/30/12	$32,638	Southeast
45971	Refining SEAK Pink Salmon Forecast	2008	This project will refine the Southeast Alaska (SEAK) regional pink salmon forecast by 1) integrating additional sources of information about early marine growth, 2) inferring stock-specific marine growing conditions from hatchery-marked chum salmon, and 3) incorporating oceanographic data from the Gulf of Alaska and SEAK inside waters.	Univ. of Alaska Fairbanks, NOAA Alaska Fisheries Science Center	7/1/11	3/31/13	$102,327	Southeast
45329 (800)	Upper Chilkoot Watershed Assessment	2007	This project will identify and analyze the location and patterns of salmonid species in the Upper Chilkoot Valley, one of two major watersheds supporting subsistence fisheries in the Haines area. The work will continue previous assessment work by Takshanuk Watershed Council (TWC) that focused on the lower portion of the Chilkoot Valley; this project will expand the geographic scope of the work and complete mapping of the Anadromous Waters Catalog (AWC) in the valley. *This project expands on the cataloging and characterization work begun in AKSSF projects 45825 and 45959.*	Takshanuk Watershed Council (TWC)	7/1/10	6/30/11	$29,951	Southeast
45091	DNR Canadian Mine Projects Review, Ph. 3	2005	This project will fund interagency technical reviews of numerous proposed mining projects in Canada, which have the potential to negatively impact water quality and quantity in Alaska's salmon streams. AKSSF projects 45285 and 45722 funded previous interagency reviews of Canadian mine projects.	Department of Natural Resources (DNR)	12/1/09	6/30/10	$29,047	Southeast
45006	Invasive Species - Part 1	2000	Develop and implement an Aquatic Nuisance Species Plan.	ADF&G, Sport Fish Division	10/1/01	6/30/04	$70,346	Cross-regional

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45029	Salmon Publication and Teacher's Guide - Year 1	2000	Update the Alaska Salmon publication with information on the interaction of salmon and their habitats and how AK has worked to maintain healthy salmon stocks.	ADF&G, Office of the Commissioner	7/1/01	6/30/05	$144,200	Cross-regional
45031	Oceans and Watersheds Symposium	2000	Bring together scientists and interested Alaskans to further our understanding of the oceans and watersheds that support salmon.	Exxon Valdez Oil Spill Trustees Council	12/1/01	12/1/02	$48,035	Cross-regional
45037	Marine Stewardship Council Certification of Sustainable Salmon	2000	Seek certification of AK salmon management systems as sustainable under Marine Stewardship Council criteria.	ADF&G, Office of the Commissioner	6/1/02	9/1/02	$16,367	Cross-regional
45048	DEC: Fish Tissue Sampling	2000	Collect and test fish samples for the presence of pollutants.	Department of Environmental Conservation (DEC)	7/1/01	6/30/05	$247,863	Cross-regional
45073	DCED: Alaska Salmon Marketing Program - Part 3	2000	Funds projects that will improve the marketing of AK salmon, including promotional activities, familiarization tours, trade shows, related marketing travel, packaging and label design, product sampling, and personnel costs.	Department of Community and Economic Development (DCED)	1/1/04	6/30/05	$51,500	Cross-regional
45122	Fisheries Project and Issues Coordination - Phase 1	2001	This project funds the work of the Special Assistant to the Commissioner and other efforts related to State of Alaska participation in Pacific Northwest Salmon Endangered Species Act issues; oversight of all aspects of AK's utilization of federal PCSRF funding; and provision of fisheries advisory support to the Commissioner of Fish and Game.	ADF&G - Commercial Fisheries Division	7/1/05	6/30/06	$24,469	Cross-regional
45301	Technical Assistance to Southeast Sustainable Salmon Fund	2001	Assist the Science Coordination Panel in developing and implementing the annual sustainable salmon plans and ensuring coordination among salmon projects; assist with reports and information requests for the program.	ADF&G, Office of the Commissioner	7/1/02	6/30/06	$53,358	Cross-regional
45337	Marine Stewardship Council 2003 Surveillance Audit	2001	Annual surveillance of Marine Stewardship Council certification of AK salmon fisheries as sustainable under Marine Stewardship Council criteria.	ADF&G, Commercial Fisheries Division	6/1/03	6/30/04	$27,130	Cross-regional
45338	Alaska Salmon Price Report - Year 1	2001	FY 2004 production of the Alaska Salmon Price Report.	Department of Revenue (DOR)	7/1/03	6/30/04	$51,500	Cross-regional
45340	Marine Advisory Program Small Business Assistance	2001	These funds will be used to contract with the University of Alaska Fairbanks's Marine Advisory Program for the purpose of providing technical assistance to small and startup fisheries businesses.	DCED	2/1/04	6/30/06	$200,000	Cross-regional
45341	Marine Stewardship Council 2004 and 2005 Surveillance Audits	2001	In accordance with Marine Stewardship Council requirements, ADF&G will contract with an accredited third party to conduct annual surveillance audits for 2004 and 2005.	ADF&G, Commercial Fisheries Division	1/1/04	6/30/06	$60,000	Cross-regional
45088	Angler's Guide to Salmon Fishing in Alaska	2002	A waterproof salmonid game-fish ID and conservation pocket guide for anglers will be produced. One side will provide clear identification images and information on AK's salmonid game fish and basic salmon anatomy. The other will provide anglers with conservation information on proper catch and release techniques, how to reduce impacts to salmon habitat, and how to identify and prevent transporting invasive species detrimental to salmonid populations. The guide will include messages about the importance of salmon to AK's ecosystems, economy, and way of life; about sustaining this resource now and into the future; making sure anglers know that they need a valid AK sport fishing license when engaged in fishing; and information on checking regulations for fishing areas, catch, and possession limits.	ADF&G, Office of the Commissioner's	5/15/07	6/30/07	$88,293	Cross-regional
45204	PSFMC: Atlantic Salmon and Invasives - Part 1	2002	The focus of the program is to prevent the spread of aquatic nuisance species (e.g. zebra mussels and mitten crab) into AK. All Alaskan salmon species are potentially impacted by Atlantic salmon and other invasive species.	Pacific States Marine Fisheries Commission (PSFMC)	8/1/02	6/30/07	$481,402	Cross-regional
45205	UFA: Subsistence Education - Year 1	2002	Funds a subsistence management information program to educate the public about subsistence regulations and the regulatory process.	United Fishermen of Alaska (UFA)	7/1/02	6/30/04	$250,000	Cross-regional
45206	Legislative Salmon Task Force	2002	Hold public meetings and report to the Legislature on industry and legislative changes needed to help ensure a successful salmon industry in AK.	Alaska State Legislature	7/1/02	5/31/04	$368,440	Cross-regional
45207	Technical Assistance - Planning	2002	Provides economic and scientific planning with the Stakeholder and Science Coordination Panels.	ADF&G, Office of the Commissioner	10/1/02	6/30/07	$320,208	Cross-regional

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45208	Technical Assistance - Economics	2002	Provides economic analysis and AKSSF project management.	ADF&G, Commercial Fisheries Division	10/1/02	2/8/07	$209,220	Cross-regional
45221	AYK: Salmon Research Planning - Phase 1	2002	Facilitate the development and implementation of an AYK area research and restoration plan.	Bering Sea Fishermen's Association (BSFA)	10/15/02	6/30/07	$1,722,049	Cross-regional
45255	DEC: Fish Safety Monitoring	2002	Monitor salmon for heavy metals and other persistent bioaccumulative toxins.	Department of Environmental Conservation (DEC)	8/1/03	6/30/05	$308,623	Cross-regional
45266	Fisheries Project and Issues Coordination - Phase 2	2002	Track and coordinate Pacific Northwest Endangered Species Act salmon issues as they relate to AK, oversee AK's utilization of PCSRF funds, and provide fisheries issues assistance to the Commissioner.	ADF&G, Office of the Commissioner	6/1/03	6/30/07	$250,000	Cross-regional
45269	Marine Stewardship Council 2005 Recertification	2002	In accordance with Marine Stewardship Council requirements, ADF&G will contract with an accredited third party to conduct the five-year recertification inspections planned for 2006.	ADF&G, Commercial Fisheries Division	1/1/05	6/30/07	$147,026	Cross-regional
45283	Salmon Publication Teacher's Guide and Distribution - Year 2	2002	*AKSSF Project 45029 funded the production "Alaska's Wild Salmon" and associated teacher's guide. This project is to ensure adequate funding remains available for distribution and possible reprinting of this volume.*	ADF&G, Office of the Commissioner	7/1/04	6/30/07	$39,256	Cross-regional
45286	ASMI: Wild Alaska Salmon Campaign	2002	Create a marketing and consumer education campaign using various media: national TV networks, cable TV, national magazines, and newspapers. This will include initial research to plan the strategy for a series of campaigns throughout 2004 and 2005.	Alaska Seafood Marketing Institute (ASMI)	10/1/04	6/30/06	$2,060,000	Cross-regional
45360	ASMI: Alaska Salmon Sustainability Education	2003	The Alaska Seafood Marketing Institute (ASMI) has identified a need to provide sustainability information to seafood consumers. This project will promote wild Alaska salmon and salmon products with a campaign designed to educate the retail trade and the consumer regarding sustainably managed Alaska salmon in the domestic market.	Alaska Seafood Marketing Institute (ASMI)	1/14/08	06/30/08	$461,440	Cross-regional
45361	Marine Stewardship Council 2007-2008 Annual Surveillance Audit	2003	In October 2007, AK's commercial salmon fisheries were recertified as in compliance with the Principles and Criteria for Sustainable and Well Managed Fisheries set forth by the Marine Stewardship Council. As part of the recertification, ADF&G agreed to contract with a third party accredited by Marine Stewardship Council to conduct required annual surveillance audits. The first of these audits will be performed in the winter/spring of 2007 - 2008, and, in addition to the standard review of fishery compliance, will include a focus on progress in meeting recommendations and conditions found in the recently completed five-year recertification by Scientific Certifications Systems.	ADF&G, Office of the Commissioner	11/15/07	06/30/08	$31,284	Cross-regional
45431	Coded-Wire Tagging Manual	2003	Funds the completion of a manual that will detail all the planning, capture, and tagging aspects needed to conduct a successful coded-wire tagging project.	ADF&G, Sport Fish Division	3/16/04	6/30/07	$49,696	Cross-regional
45447	Coded-Wire Tag Lab Support	2003	The workload of the ADF&G Coded-Wire Tag Lab has increased because of additional tagging programs, recent large returns of Chinook and coho salmon, and from effects of mass marking programs instituted elsewhere along the Pacific coast. This project would support the increased costs.	ADF&G, Commercial Fisheries Division	7/1/04	6/30/08	$99,999	Cross-regional
45453	UFA: Subsistence Program - Year 2	2003	Foster public awareness of and involvement in, the federal subsistence regulatory and management programs in AK. The value to the public derives from a better understanding of subsistence regulations and an increased participation in the regulatory process, resulting in improved coordination between State and Federal management.	United Fishermen of Alaska (UFA)	3/1/04	12/31/04	$99,000	Cross-regional
45454	DCED: Asian Salmon Marketing	2003	Fund a development specialist to work in Korea, Taiwan, and Hong Kong to facilitate sales by introducing buyers and sellers with a focus on moving large volumes from the most troubled salmon species (pink and chum). Educate the public, restaurant, institutional consumers, and importers about the advantages of AK's products, and educate suppliers about Asian markets.	Department of Community and Economic Development (DCED)	3/15/04	10/2/07	$340,033	Cross-regional
45461	Fisheries Project and Issues Coordination - Phase 3	2003	Funds the Special Assistant to the Commissioner for efforts related to State participation in Pacific Northwest salmon Endangered Species Act issues; oversight of AK's utilization of PCSRF funding; and advisory support to the Commissioner.	ADF&G, Commercial Fisheries Division	5/1/05	1/10/08	$210,503	Cross-regional
45462	Cross-regional Salmon Fisheries Scientist - Part 1	2003	Provide direct technical and other assistance on matters related to salmon stock assessment, escapement enumeration and goals, stock identification, and forecasting. Control the quality of salmon research through the development, review, and modification of project operational plans.	ADF&G, Commercial Fisheries Division	7/1/04	6/30/07	$101,588	Cross-regional

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45463	Cross-regional Salmon Fisheries Scientist - Part 1	2003	Provide direct technical and other assistance on matters related to salmon stock assessment, escapement enumeration and goals, stock identification, and forecasting. Control the quality of salmon research through the development, review, and modification of project operational plans.	ADF&G, Commercial Fisheries Division	7/1/04	6/30/07	$36,802	Cross-regional
45465	Technical Assistance – Project Administration	2003	Staff project review and recommendation processes, and track project expenditures monthly. Responsible for project set up and associated approvals, reporting, notification, and evaluation. Coordinate with Division of Admin to ensure state and federal compliance.	ADF&G, Commercial Fisheries Division	7/1/05	6/30/08	$362,942	Cross-regional
45467	DCCED: Fisheries Revitalization Strategy Program Analysis	2003	Develop economic analysis on the State's impact on the salmon industry's business environment and increase involvement in certain grant activities under the Fisheries Revitalization Strategy to improve the likelihood of success.	Department of Commerce, Community, and Economic Development (DCCED)	11/16/04	6/30/08	$109,093	Cross-regional
45469	Professional Training - Commercial Fisheries Division	2003	This proposal would provide professional training to improve staff skills in stock assessment and fishery management. ADF&G has long been recognized as one of the world leaders in sustainable fishery management and stock conservation because of a dedicated, knowledgeable, and skilled work force. The department is likely to lose that status because of the loss of its most senior and talented staff to other agencies that offer higher pay, more benefits and less responsibility, and a lack of an influx of talented entry-level professionals.	ADF&G, Commercial Fisheries Division	12/1/04	6/30/07	$52,272	Cross-regional
45473	DEC: Laboratory Equipment	2003	DEC's Environmental Health Lab is tasked with analyzing foods for environmental pollutants. The Lab's existing analytical equipment is no longer serviceable and is being replaced. AKSSF funding will be used to finance a portion of the cost of acquiring the new equipment used for salmon analysis.	Department of Environmental Conservation (DEC)	3/15/05	6/30/06	$149,273	Cross-regional
45477	Alaska Salmon Price Report - Year 2	2003	Produced by the Department of Revenue, the report comes out every four months and contains wholesale salmon values and pounds by region, by month and by product form.	Department of Revenue (DOR)	7/1/04	6/30/06	$103,000	Cross-regional
45480	DCCED: Canned Salmon Export Aid Demonstration Project	2003	DCCED will procure three containers of canned pink and chum salmon which will be shipped to three separate countries. In a companion project funded by another source, the food will be distributed to end users via private volunteer organizations.	Department of Commerce, Community, and Economic Development (DCCED)	9/19/05	11/30/07	$124,594	Cross-regional
45504	Scientific Fisheries Systems Riverine Sonar	2004	Evaluate the utility of broadband sonar systems for use in riverine environments. There are three specific objectives that will be addressed: develop a methodology for broadband calibration; differentiate species by precise size measurement; and provide data so individual fish can be tracked.	Scientific Fisheries Systems	11/1/04	12/31/07	$969,029	Cross-regional
45516	ADF&G Sonar Work with Scientific Fisheries Systems	2004	Provide department assistance to a project testing capabilities of a system to effectively discriminate between Chinook and sockeye salmon using broadband sonar.	ADF&G, Sport Fish Division	7/1/05	6/30/08	$15,500	Cross-regional
45517	UFA: Subsistence Education - Year 3	2004	Foster public awareness of and involvement in the federal subsistence regulatory and management programs in AK. The value to the public derives from a better understanding of subsistence regulations and an increased participation in the regulatory process, resulting in improved coordination between State and Federal management.	United Fishermen of Alaska (UFA)	10/1/04	12/31/05	$98,453	Cross-regional
45518	Ocean Policy Coordinator	2004	The position of Ocean Policy Coordinator will recommend and coordinate state policies for ocean and coastal research and management in AK and communicate with federal and local governmental entities and nongovernmental organizations in AK.	ADF&G, Office of the Commissioner	3/1/05	6/30/05	$35,612	Cross-regional
45519	Fisheries Project and Issues Coordination - Phase 4	2004	Funds the work of the Special Assistant to the Commissioner and other efforts related to AK participation in Pacific Northwest salmon Endangered Species Act issues; oversight of all aspects of AK's utilization of federal PCSRF; and fisheries advisory support to the Commissioner of F&G.	ADF&G, Commercial Fisheries Division	7/1/06	3/27/09	$211,344	Cross-regional
45575	SFS: Peer-Reviewed Results SciFish Sonar Eval	2004	Project participants will prepare and submit a publication summarizing the results of AKSSF funded Scientific Fisheries Systems Riverine Sonar project (AKSSF project #45504) to a peer-reviewed journal.	Scientific Fishery Systems, Inc.	2/1/09	3/31/09	$18,777	Cross-regional
45576	*Sustaining AK Fisheries* - Printing	2004	This project partially funds printing of additional copies of the publication *Sustaining Alaska's Fisheries: Fifty Years of Statehood.*	ADF&G	4/1/09	6/30/09	$5,150	Cross-regional
45577	PCSRF Technical Assistance Year 5	2004	The project will provide administrative support for ADF&G's management of PCSRF funds appropriated to the State of Alaska. PCSRF supports salmon sustainability throughout Alaska to the benefit of thousands of commercial, subsistence, and recreational users, as well as the communities dependent upon them.	ADF&G, Commercial Fisheries Division	1/1/08	6/30/09	$450,251	Cross-regional

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45578	PCSRF Accounting Assistance Yr 5	2004	This project will fund the accounting position (PCN 11-0227 in the ADF&G Administration Office – Accounting Technician II) responsible for the project paperwork approved for processing by the AKSSF office (i.e., contracts, RSAs and Cooperative Agreements). This position will also monitor payments to ensure timely completion, and respond to agencies inquiring on payment status and/or contract, RSA or Cooperative Agreement status.	ADF&G, Commercial Fisheries Division	7/1/08	6/30/09	$51,689	Cross-regional
45056	AFDF: Salmon Oil Product Development	2005	This project will investigate the use of adsorption technology to produce purified salmon oil for human consumption, and will develop a method applicable for use by Alaska's fish meal processors, salmon processors, and entrepreneurs. Complete project results will be made available via the AFDF, UAF FITC, and LSU AgCenter websites: www.afdf.org; www.lsuagcenter.com; www.sfos.uaf.edu/fitc/.	Alaska Fisheries Development Foundation (AFDF)	7/1/08	3/31/10	$69,190	Cross-regional
45066	AFDF: BSAI CP Salmon-Excluder Trawl Design	2005	This project will conduct at-sea tests of the "flapper panel" design in the catcher-processor fleet. Currently, a "flapper" design that employs a short, inverted, U-shaped section of diamond-mesh panel to serve as a collapsible liner has shown the most potential for excluding salmon on smaller catcher vessels. The "flapper panel" approach has not been tested and evaluated in the larger vessels of the catcher/processor fleet.	Alaska Fisheries Development Foundation (AFDF)	7/15/08	12/31/08	$79,865	Cross-regional
45067	AFDF: Project Support FY09	2005	The focus of this project is the development and administration of industry-prioritized salmon enhancement projects.	Alaska Fisheries Development Foundation (AFDF)	10/1/08	9/30/09	$107,242	Cross-regional
45068	AFDF: Symphony of Seafood	2005	This project will support the Alaska Fisheries Development Foundation (AFDF) efforts to stimulate and recognize innovation by the industry in salmon products, expose market interests to this innovation, and assess comparable innovative efforts. Project funding also supports Alaskan participation in regional and national fora and expositions showcasing innovation in the handling, processing, packaging, and quality control measures of salmon. *This funding allows continuation of work begun in AKSSF project #45689.*	Alaska Fisheries Development Foundation (AFDF)	10/15/08	6/30/09	$55,567	Cross-regional
45085	MSC Annual Surveillance Audit Process	2005	This project paid for the cost of the required annual surveillance audit for maintenance of certification of Alaska salmon fisheries as sustainable through the Marine Stewardship Council (MSC). ADF&G was the client for MSC certification, and as such contracted with Moody Marine Inc. to conduct the audit. Moody worked with ADF&G staff and others to obtain the information needed to complete the process. This information, which included information on the progress made in meeting conditions identified in the 5-year recertification process, was provided to MSC for their confirmation of the sustainable management of Alaska's salmon fisheries. This certification allows eligible entities to utilize MSC certification in the marketing of Alaska salmon products.	ADF&G, Office of the Commissioner	7/1/08	6/30/09	$40,514	Cross-regional
45087	Cross-regional Escapement Goals Assessment	2005	This project will fund several activities that will assist the escapement goal team and enable the Department to conduct improved analyses and refinement of salmon escapement goals. Planned activities include: (1) training workshops and short-courses to improve the technical skills of Department staff conducting escapement goal reviews, (2) a Cross-regional assessment of escapement goals and their relationship to fishery management regimes, and (3) ad-hoc external escapement goal review teams formed to provide peer review and to assist the Department in both reviewing existing goals and formulating recommendations for improved goals.	ADF&G, Commercial Fisheries Division	7/28/09	3/31/10	$163,414	Cross-regional
45089	AFDF: ICST 2010 Conference Sponsorship	2005	The 2nd International Conference on Seafood Technology (ICST) will focus on seafood processing technology, much of which is applicable to the salmon industry. The ICST organizing/steering committee selected Visions, Inc. of Anchorage as the official organizer for the event. This project will fund a portion of Visions, Inc.'s professional fees to ensure the successful planning, organization, and implementation of the ICST.	Alaska Fisheries Development Foundation (AFDF)	10/1/09	3/31/10	$25,000	Cross-regional
45093	PCSRF Technical Assistance Year 6	2005	This project provides administrative support for ADF&G's management of the Alaska Sustainable Salmon Fund (AKSSF). AKSSF staff assists with project management, implementation, and oversight of the program to ensure appropriate use of federal funds on behalf of the State of Alaska.	ADF&G, Commercial Fisheries Division	7/1/09	6/30/10	$408,250	Cross-regional

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45094	PCSRF Accounting Assistance Year 6	2005	This project funds an accounting position in the ADF&G Administration Office responsible for Alaska Sustainable Salmon Fund (AKSSF) contractual paperwork (i.e., contracts, RSAs, and Cooperative Agreements). This position also processes and monitors subaward payments to ensure timely completion and responds to agencies inquiring on payment status and/or contract, RSA, or Cooperative Agreement status.	ADF&G, Commercial Fisheries Division	7/1/09	6/30/10	$66,325	Cross-regional
45601	UFA: Subsistence Education - Year 4	2005	Foster public awareness of and involvement in the federal subsistence regulatory and management programs in AK. The value to the public derives from a better understanding of subsistence regulations, and an increased participation in the regulatory process.	United Fishermen of Alaska (UFA)	7/1/05	12/31/06	$97,985	Cross-regional
45604	AVI: Salmon Enhancement/Restoration Technical Assistance	2005	This project will be used to carry out the necessary preparatory tasks for the field implementation of three salmon enhancement/restoration projects.	Alaska Village Initiatives (AVI)	1/1/06	3/31/10	$403,400	Cross-regional
45636	DEC: Fisheries Monitoring Project	2005	This project will collect data to identify whether contaminants are present and at what concentrations they are occurring. The data generated by this project will provide input to the Alaska Department of Health and Social Services to determine whether advisories are required to protect public health. This project will provide the analytical results required to support the wholesomeness of AK's salmon resources in national and international arenas. The fish samples will be analyzed for trace metals (total mercury, arsenic, cadmium, nickel, selenium, chromium, and lead), organochlorine contaminants (organochlorine pesticides and PCB, PBDE, and dioxin and furan congeners) and detailed analyses for mercury and arsenic compounds. Trace metal analysis will be done on all samples.	Department of Environmental Conservation, Division of Environmental Health (DEC)	7/1/05	3/31/10	$1,469,779	Cross-regional
45664	AFDF: Salmon Byproduct Documentary	2005	This project funds the production of an educational video documenting the use of salmon byproducts as a sustainable source of omega-3 fish oil.	Alaska Fisheries Development Foundation (AFDF)	8/1/07	11/1/08	$131,102	Cross-regional
45680	AFDF: Perishable Handling Containter Tests	2005	This project will lease the prototype container for five months to conduct test transports of salmon in the refrigerated container to determine the appropriateness of the technology for different high quality value-added salmon products. Different airports throughout Alaska will be tested employing different carriers capable of handling LD3-containers. Shipment via truck may be completed to test the multi-modal approach in bringing salmon from processors to airports, particularly on the Kenai Peninsula.	AFDF	5/8/08	10/31/08	$28,299	Cross-regional
45687	Fisheries Project and Issues Coordination - Phase 5	2005	This project funds the work of the Special Assistant to the Commissioner and other efforts related to State of Alaska participation in Pacific Northwest salmon Endangered Species Act issues; oversight of all aspects of AK's utilization of federal PCSRFs (AKSSF); and provision of fisheries advisory support to the Commissioner of Fish and Game. This project continues AKSSF project 45519.	ADF&G, Commercial Fisheries Division	7/1/08	6/30/10	$244,686	Cross-regional
45688	AFDF: Education and Outreach FY08	2005	This project builds upon AFDF's past efforts in supporting efficiencies in the salmon harvesting and processing industry by collaborating with Alaska Sea Grant College Program in producing materials on salmon handling, processing, and products; convening two technology transfer forums at 2007 Pacific Marine Expo for industry members to discuss emerging processing and handling techniques for salmon flesh and salmon processing waste; and developing a web-based seminar series with Global Food Collaborative specifically to address advances in handling, processing, and recovery of value with Alaska salmon. *This project is one of two that continues work begun in AKSSF project 45622.* See also 45689.	Alaska Fisheries Development Foundation (AFDF)	10/8/07	6/30/08	$28,246	Cross-regional
45689	AFDF: Product Innovation and Technology	2005	This project will support the AFDF efforts to recognize innovation by the industry in salmon products, expose market interests to this innovation, and assess comparable innovative efforts with competition from international interests and farmed salmon. This project will also support technology transfer by allowing participation in national and international forums and expositions showcasing innovation in the handling, processing, packaging, and quality control measures of salmon. *This project is one of two that continues work begun in AKSSF project 45622; see also project 45688.*	Alaska Fisheries Development Foundation (AFDF)	10/10/07	6/30/08	$28,094	Cross-regional
45096 (600)	AFDF: Project Support FY10	2005	The focus of this project is the development and administration of industry-prioritized salmon enhancement projects including those that improve the handling, processing, transporting, new product development, and alternative uses of salmon flesh and non-flesh materials; and research and studies on bycatch reduction. *This project continues work begun in AKSSF projects 45151 (700) and 45067 (600).*	Alaska Fisheries Development Foundation (AFDF)	10/1/09	5/30/10	$90,488	Cross-regional

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45150	AFDF: Salmon Co-Product - Phase 2	2006	AFDF, as an industry-based foundation, will work with its members and the salmon processing industry in researching and developing methods to optimize the use of salmon and to strive towards full utilization by increasing the recovery of salmon processing waste and by developing byproducts. This project involves technology and innovation, and offers significant long-term benefit to the industry's financial bottom line.	Alaska Fisheries Development Foundation (AFDF)	9/24/07	6/30/09	$359,601	Cross-regional
45151	AFDF: Project Support FY08	2006	The focus of this project is the development and administration of industry prioritized salmon projects. Specifically, this project will conduct a set of activities that include: • solicitation, through industry outreach, projects that enhance economic recovery of Alaska salmon through improvements in handling, processing, transporting, and developing new products and alternative uses of salmon flesh and non-flesh materials; • development statements of work and supporting information for projects consistent with AKSSF requirements; and • administration of projects to meet milestones and prepare deliverables consistent with approved statements of work.	Alaska Fisheries Development Foundation (AFDF)	7/30/07	9/30/08	$205,771	Cross-regional
45153	AFDF: Alaska Salmon Co-Products - the Future	2006	This project will develop a six-minute DVD in an 'edu-tainment' format that will highlight the opportunities for producing several salmon co-products: oils (human grade, for pets, and industrial uses); biofuels that can be used to power industrial boilers and other equipment including boats and cars; and 'other' categories, including salmon skins, gels, films, and uses in the pharmaceutical and cosmetic industries. Project results will be made available to the public on the AFDF website (www.afdf.org).	AFDF	10/1/08	06/30/09	$32,960	Cross-regional
45701	UFA: Subsistence Education - Year 5	2006	Provide information on and raise public awareness regarding subsistence fisheries and management to under-represented groups/citizens via newsletters, website, office presence, and informational presentations.	United Fishermen of Alaska (UFA)	10/19/06	6/30/08	$98,026	Cross-regional
45703	Southeast Sustainable Salmon Fund Technical Assistance	2006	Funds the accounting position in the ADF&G Administration Office that is responsible for the project paperwork that is approved for processing by the AKSSF office (i.e., contracts, Reimbursable Service Agreements, and Cooperative Agreements). This position will also monitor payments to ensure timely completion, and respond to agencies inquiring on payment status and/or contract, Reimbursable Service Agreement or Cooperative Agreement status.	ADF&G, Administration/Headquarters	12/1/06	6/30/11	$66,950	Cross-regional
45707	Chinook Technical Committee Biometrician -Year 2	2006	This proposal would secure funds to hire a Biometrician to perform biometrical analyses, statistical analyses and mathematical modeling to aid in the implementation of the Pacific Salmon Treaty, and to aid in the management of Chinook salmon fisheries of Southeast AK.	ADF&G, Commercial Fisheries Division	7/1/07	6/30/08	$84,460	Cross-regional
45711	ASMI: National Consumer Education Campaign	2006	ASMI will launch a consumer television education campaign on the Food Network (cable TV).	Alaska Seafood Marketing Institute (ASMI)	10/31/06	6/30/07	$686,917	Cross-regional
45721	Pacific Salmon Management Support Personnel	2006	This project funds (salaried and contractual) work and related expenses with regard to management of Pacific salmon and their habitats. The primary focus is management under the Pacific Salmon Treaty. Work includes serving on technical committees of the Pacific Salmon Commission, participation in the development and application of salmon escapement enumeration techniques and escapement goals, the design and oversight of salmon management related projects, and the monitoring of, and participation in, forums regarding the management of Pacific salmon and conservation and restoration of salmon habitat.	ADF&G, Office of the Commissioner	6/1/07	3/31/11	$343,938	Cross-regional
45095 (600)	AFDF: Slaska Symphony of Seafood 2010	2006	AFDF will convene the 17th annual Alaska Symphony of Seafood (ASOS) to showcase new Alaska salmon products and will support the winning entries by introducing them at the International Boston Seafood Show (IBSS). *This project continues work begun in AKSSF projects 45689 and 45068 (600).*	Alaska Fisheries Development Foundation (AFDF)	10/15/09	4/30/10	$50,092	Cross-regional
45154 (700)	AFDF: Project Support FY11	2006	This project will develop and administer industry-prioritized salmon enhancement projects including those that improve the handling, processing, transporting, new product development, and alternative uses of salmon flesh and non-flesh materials; and research and studies on bycatch reduction. *This project continues work begun in AKSSF projects 45067 and 45096.*	Alaska Fisheries Development Foundation (AFDF)	6/1/10	03/31/11	$115,446	Cross-regional

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45157 (700)	AFDF: Energy Use in Fisheries	2006	Alaska Fisheries Development Foundation (AFDF) will enhance the salmon industry's efforts to increase fuel efficiency through participation in and sponsorship of the *Energy Use in Fisheries Symposium* November 14-17, 2010. This symposium offers the opportunity for commercial and recreational fishermen, processors, engineers, vessel and engine developers, aquaculturists, fisheries managers, administrators, scientists, and others from around the world to meet, address both direct and indirect effects of energy costs related to fisheries, and share solutions. This symposium's objectives and agenda are of critical importance to the Alaska salmon fishing industry and AFDF's participation in it further solidifies the industry's commitment to responsible and sustainable conduct of its world class salmon industry.	Alaska Fisheries Development Foundation (AFDF)	9/23/10	12/31/10	$9,006	Cross-regional
45802	PCSRF Accounting Assistance	2007	Funds the accounting position responsible for the project paperwork approved for processing by the AKSSF office (i.e., contracts, RSAs and Cooperative Agreements). This position will also monitor payments to ensure timely completion, and respond to agencies inquiring on payment status and/or contract, RSA or Cooperative Agreement status	ADF&G, Administrative Services Division	12/18/07	6/30/10	$33,423	Cross-regional
45803	PCSRF Technical Assistance - Year 8	2007	The project will provide administrative support for ADF&G's management of PCSRF funds appropriated to the State of Alaska. The PCSRF supports salmon sustainability throughout AK to the benefit of thousands of commercial, subsistence, and recreational users, as well as the communities dependent upon them.	ADF&G, Commercial Fisheries Division	1/1/08	6/30/10	$132,050	Cross-regional
45804	PCSRF Technical Assistance FFY07	2007	This project funds the Alaska Sustainable Salmon Fund (AKSSF) program manager and staff to perform AKSSF program oversight, project management, and fiscal management to ensure appropriate use of federal funds on behalf of the State of Alaska.	ADF&G, Commercial Fisheries Division	7/1/10	6/30/12	$548,129	Cross-regional
45301 (800)	Outreach & Education Grant Program – Year 1	2007	The Alaska Department of Commerce, Community, and Economic Development (Commerce), Division of Community and Regional Affairs (DCRA), will administer the Alaska Sustainable Salmon Fund Outreach and Education Program to educate the public on the value of and types of actions that should be taken for conservation, restoration, and sustainability of healthy Pacific salmonid populations and their habitat	Alaska Department of Commerce, Community, & Economic Development (Commerce)	8/1/10	3/31/12	$1,030,000	Cross-regional
45902	PCSRF Technical Assistance FFY08	2008	This project funds the Alaska Sustainable Salmon Fund (AKSSF) program manager and staff to perform AKSSF program oversight, project management, and fiscal management to ensure appropriate use of federal funds on behalf of the State of Alaska.	ADF&G, Commercial Fisheries Division	7/1/10	6/30/13	$755,725	Cross-regional
45961	SE Subsistence Sockeye – Year 3	2008	This project will continue to assess and measure the sockeye breeding stock sizes and subsistence harvests at Hetta, Klawock, Falls, and Kanalku Lakes. The goal of these assessments is to increase the amount and quality of information available to guide fishery mangers in their decision making. The project will also compile, maintain, and distribute information from databases, published reports, and other sources pertinent to all sockeye salmon stocks and fisheries in Southeast Alaska in support of management and conservation of these salmon resources. Field activities (data collection for the assessments performed in this project) were funded separately. *This project continues work begun in AKSSF projects 45772 and 45833.*	ADF&G, Commercial Fisheries Division	2/16/10	6/30/10	$30,782	Cross-regional
44602	PCSRF Technical Assistance FFY10	2010	This project funds the Alaska Sustainable Salmon Fund (AKSSF) program manager and staff to perform AKSSF program oversight, project management, and fiscal management to ensure appropriate use of federal funds on behalf of the State of Alaska.	ADF&G, Commercial Fisheries Division	2/1/10	6/30/15	$291,777	Cross-regional
45750	Fisheries Project and Issues Coordination	2006	This project provides oversight of the Alaska Sustainable Salmon Fund and fisheries advisory support to the Commissioner of ADF&G.	ADF&G, Commercial Fisheries Division	6/14/10	6/30/11	$226,110	Cross-regional
45751	PCSRF Technical Assistance FFY06	2006	This project provides administrative support for ADF&G's management of the Alaska Sustainable Salmon Fund (AKSSF). AKSSF staff will assist with project management, implementation, fiscal management, and oversight of the program to ensure appropriate use of federal funds on behalf of the State of Alaska.	ADF&G, Commercial Fisheries Division	7/1/10	6/30/11	$267,111	Cross-regional
45030	CRITFC: Stock Assessment and Research - Upper Columbia River Chinook	2000	Research and evaluate the contribution of the Priest Rapids Hatchery to supplement naturally spawning fall Chinook in the upper Columbia River.	Columbia River Inter-Tribal Fish Commission (CRITFC)	10/1/01	12/31/04	$164,750	Columbia River
45059	CRITFC: Federal Energy Regulatory Commission: Hanford Reach	2000	Map bathymetry of the Hanford Reach, and design program to determine the number of outmigrating fall Chinook smolts stranded due to low water levels.	Columbia River Inter-Tribal Fish Commission	10/1/02	6/30/05	$575,692	Columbia River

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Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45502	Adak Boat Harbor	2004	Construct Phase I of a new small boat harbor in Adak to provide dock and moorage for boats that will participate in developing fisheries. Provide for the dredging and placement of open cell pile dock with fendering system and adjacent dredging.	City of Adak	7/1/04	6/30/07	$1,484,217	Westward
45065	AVI: Cascade Creek Fish Passage Enhancement	2005	This project will enhance access at the mouth of Cascade Creek and open approximately five miles of rearing and spawning habitat and access to four small lakes in the watershed.	Alaska Village Initiatives (AVI)	6/1/08	3/31/10	$48,657	Westward
45169	AFDF: Setnet Salmon Quality Enhancement	2006	To improve seafood quality, safety, and efficiency and maximize participation in a high-quality sockeye program, Alaska Fisheries Development Foundation (AFDF) will contract with Aleutia to purchase 30 small insulated plastic fish totes (quarter totes) for use by skiff fishermen. Additionally, Aleutia will purchase 30 data logger temperature monitors, one data shuttle, and accompanying computer software. These simple-to-implement monitors log in-tote chill temperatures at set intervals to ensure totes are being used appropriately and the fish has been chilled adequately.	Alaska Fisheries Development Foundation	12/12/10	3/31/10	$14,518	Westward
45177 (700)	AFDF: Kodiak Salmon - Renewable Power	2006	Based on the use of renewable energy power sources for processing, this project funds a campaign to promote Kodiak harvested and processed salmon as a unique and sustainable product by means of direct contact with buyers, traditional and social media channels, and collaborative efforts with partner organizations.	AFDF: Alaska Fisheries Development Foundation	12/29/10	3/31/11	$17,000	Westward
45859	Chignik Sockeye Smolt Migration	2007	Using genetic techniques, this study will assess interactions and competition of sockeye salmon smolt in the Chignik watershed allowing biologists to predict salmon response to environmental change within the system and implement an appropriate commercial fisheries management strategy to maximize harvest.	ADF&G, Commercial Fisheries Division	7/1/08	6/30/09	$105,016	Westward
45865	AWC in Western Alaska	2007	This project will fund ADF&G area office staff time to review department records, publications, and Fish Resource Permit reports to determine if data for unsubstantiated water bodies or water bodies not currently listed in the FDD/AWC exists. If so, assisting personnel will be tasked to complete and submit nomination forms which will be used to substantiate anadromous fish species presence in unsubstantiated water bodies or water bodies not currently listed in the FDD/AWC.	ADF&G, Sport Fish Division	7/1/08	6/30/09	$39,435	Westward
45919	Genetics of Westward Chum Salmon	2008	This project will assemble a comprehensive baseline of DNA data from 96 SNPs for chum salmon from the Westward Region of Alaska using newly collected and archived tissues. This information will be used to describe the genetic diversity of spawning populations of chum salmon both in terms of geographic and temporal variability. Once assembled, the data will be incorporated and merged with the larger Western Alaska Salmon Stock ID Program (WASSIP) baseline and used to more accurately and precisely apply genetic stock identification applications to estimate the catch contribution of Westward chum to WASSIP fisheries.	University of Washington (UW), School of Aquatic and Fishery Sciences	7/16/09	6/30/11	$308,282	Westward
44520	Chignik Mgmt Area Subsistence	2009	This project focuses on the subsistence salmon fisheries in the communities of Chignik Lake, Chignik Bay, Chignik Lagoon, and Perryville. The harvest of subsistence salmon in these communities is influenced by the commercial salmon fishery, as many commercial fishermen are also subsistence harvesters. Since 1990, changes have occurred in the commercial fishery that have influenced subsistence patterns. Using social science research methods, this project will investigate the strategies used by local families to adapt to these changes. This project will provide essential context for interpretation of harvest data and fisheries management decisions.	ADF&G, Subsistence Division	5/1/10	6/30/13	$111,400	Westward
44528	Karluk Lake Limnology	2009	This project will continue collection and evaluation of high-resolution spatial and temporal data on abiotic and biotic water quality components of freshwater habitats that affect the distribution and production of wild juvenile sockeye and Chinook salmon in Karluk Lake. Using spatial data models, this information will allow the detection and evaluation of the effects of changing climatic and rearing conditions that influence the productivity and maintenance of these important subsistence stocks. *This project continues work begun in AKSSF projects 45854 and 45884.*	ADF&G, Division of Commercial Fisheries	7/1/11	11/30/13	$93,988	Westward
45849	Kodiak Comprehensive Salmon Plan	2007	This project performs a complete review of past Kodiak Regional CSPs and will submit an updated Kodiak Regional CSP to the Commissioner of ADF&G. Public input regarding Kodiak salmon will be solicited and incorporated. Educational public meetings will initially be held in each of the affected Kodiak communities, including the City of Kodiak, Ouzinkie, Port Lions, Larsen Bay, Karluk, Akhiok, and Old Harbor.	Kodiak Regional Aquaculture Association (KRAA)	5/1/08	6/30/11	$208,694	Westward

Alaska Sustainable Salmon Fund Projects

(Exclusive of AYK SSI Earmark Projects)

FFY 2000-2010

Current to September, 2011

Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
45854	Autonomous Salmon Lake Mapping	2007	This project addresses the need to collect high spatial and temporal resolution data on the abiotic and biotic water quality parameters that influence the growth, survival, and sustainability of wild juvenile sockeye salmon in lakes on the Kodiak Archipelago, Alaska. This project will utilize the application of an Autonomous Underwater Vehicle (AUV) to map water quality parameters important to marine and freshwater survival of wild salmon stocks on Kodiak Island. In addition, a feasibility study will assess juvenile salmon abundance in the fall and in the following spring to see if the AUV is capable of estimating winter survival.	ADF&G, Commercial Fisheries Division	5/29/08	12/31/10	$138,123	Westward
45925	Chignik Smolt Genetics	2008	This project will estimate stock-specific freshwater production trends through genetic stock identification of juvenile sockeye salmon. Genetic data will be correlated with smolt age and condition information and population estimates to enable a comprehensive examination of the Chignik watershed for use in estimating primary production, refining appropriate escapement levels, and understanding how ongoing environmental changes in the watershed affect the rearing strategies, growth, or mortality of each stock. *This study continues work begun in AKSSF project 45859.*	ADF&G, Commercial Fisheries	8/1/10	10/1/12	$121,404	Westward (Alaska Peninsula)
44509	Chignik Inseason Genetics	2009	Two distinct runs of sockeye salmon in the Chignik River watershed (Black Lake early run and Chignik Lake late run) provide a crucial cultural and food resource for five subsistence communities. This project will collect and analyze genetic information both inseason and postseason to determine the run timing through the Chignik River weir of early- and late-run Chignik sockeye salmon. Two years of samples will be processed postseason to examine the stock composition of the run components through time. In the third year, inseason estimates will be made to assess the utility of this data in management of the fishery.	ADF&G, Commercial Fisheries Division	6/1/10	6/30/13	$169,209	Westward (Alaska Peninsula)
44611	Chignik Escapement Enumeration	2010	Current salmon escapement is monitored at the Chignik weir through August 31, after which a model is used to estimate September sockeye salmon escapement based on extrapolation from August escapement counts. These post-weir models have never been validated with actual counts in September, nor is there information on the structure of the coho salmon run, which is also an important subsistence resource. This project will estimate the escapement of late-run sockeye and coho salmon with a dual-frequency identification sonar (DIDSON), collect ASL data, and use this information to evaluate current models of September escapement; this data will assist fisheries managers maintain the sustainability of these important subsistence runs.	ADF&G, Commercial Fisheries Division	4/1/11	10/31/13	$251,516	Westward (Alaska Peninsula)
45728	AVI: Summit Lake Stream Crossing	2006	This project will install an engineered bridge with abutments on a main tributary of the Olds River along the Summit Lake Trail on Kodiak Island. Currently forded by ATV and other vehicular traffic, the bridge will protect salmon habitat and decrease the trail's impact on the Olds River watershed.	Alaska Village Initiatives (AVI)	2/1/10	3/31/11	$133,686	Westward (Kodiak)
45884	Westward Region Limnology	2007	This project will collect spatial and temporal baseline water quality data and conduct the analysis and reporting of these baseline data from eight sockeye salmon nursery lakes of the Alaska Peninsula (two lakes) and Kodiak Archipelago (six lakes). It will monitor and describe the rearing site characteristics and ecological factors that may limit or enhance sockeye salmon production and fisheries management, and improve the assessment of current escapement goals and forecasts via the incorporation and development of limnology models or data relative to current climatic conditions.	ADF&G, Commercial Fisheries Division	5/1/09	3/31/12	$284,424	Westward (Kodiak)
44525	Pasagshak Escapement Monitoring	2009	The Pasagshak River, located on the Kodiak road system, supports the largest sockeye salmon subsistence fishery for Kodiak Island residents. Current escapement enumeration methods provide only postseason estimates via aerial and foot surveys of the spawning grounds, making inseason management impossible and refinement of an escapement goal for this stock problematic. This project will construct a conventional aluminum picket weir near the outlet of Lake Rose Tead at the outlet of the Pasagshak River on Kodiak Island to provide timely and accurate escapement information, enabling inseason management adjustments and more precise evaluation of the escapement goal to maintain the sustainability of this important subsistence salmon run.	ADF&G, Commercial Fisheries Division	4/1/11	11/30/13	$237,521	Westward (Kodiak)
44531	Genetic Diversity SW Kodiak Sockeye	2009	This project will estimate and evaluate genetic variation within and among sockeye salmon populations from southwest Kodiak Island. Specifically, the relative influence of various factors on genetic diversity will be evaluated including lake of origin, spawning habitat, spawning time, spatial isolation, and stocking history (Frazer Lake). This project will also evaluate the stock composition of sockeye returning to the Frazer Lake and Ayakulik River drainages. The genetic data from this project will expand the sockeye salmon genetic baseline used by ADF&G. This baseline will be available to determine stock compositions of state-managed fisheries so that ADF&G can manage on the sustained-yield basis.	USFWS, Conservation Genetics Laboratory and ADF&G, Gene Conservation Laboratory	7/1/11	6/1/13	$241,920	Westward (Kodiak)

Alaska Sustainable Salmon Fund Projects

(Exclusive of AYK SSI Earmark Projects)

FFY 2000-2010

Current to September, 2011

Number	Title	FFY	Description	Organization	Start Date	End Date	AKSSF Funds	Location
44616	Karluk Sockeye Smolt	2010	Karluk Lake is located on the southwest side of Kodiak Island and supports the largest sockeye salmon run in the Kodiak Management Area. Sockeye salmon smolt studies have been conducted sporadically on Karluk Lake since 1961. This project reinstitutes a multi-year Karluk Lake sockeye salmon smolt program to estimate the size and condition of outmigrating smolt; in addition, individual smolt will be collected on an annual basis for isotope analysis. This information will help develop forecasting models for Karluk Lake sockeye salmon to ensure the sustainability of this important subsistence resource.	ADF&G, Commercial Fisheries Division	5/1/11	11/30/13	$79,587	Westward (Kodiak)
45069	AFDF: Co-Product Enhancement	2005	This project will expand the use of recovered salmon proteins and oils in high quality human specialty foods through research support for product development and focus groups. A limited amount of demonstration in the market place is planned as follow-on to focus groups. The goal is to demonstrate successful prototypes in increasing the utilization of flesh and oils from salmon processing and by-product recovery.	Alaska Fisheries Development Foundation (AFDF)	11/17/08	3/30/10	$32,373	Westward (Kodiak)
45727	AVI: Afognak River Tributary Fish Pass	2006	This project will allow salmon efficient access to three miles of spawning and rearing habitat in an Afognak River tributary. Heavy equipment will be used to carve pools and channels in a natural rock formation at the falls that is currently impeding fish passage.	Alaska Village Initiatives (AVI)	1/29/10	3/31/11	$52,769	Westward (Kodiak)
45754	AVI: Cape Chiniak Culvert Replacement	2006	Three existing culverts on the road crossing Chiniak Creek are in advanced stages of corrosion and deterioration, causing high water velocities to flow through them. This project will replace two 8' diameter, and one 5' diameter culverts with a single 20' span multi-plate arch pipe. Removal of the existing culverts and installation of the 20' span arch pipe will result in efficient salmon passage through this Chiniak Creek crossing.	Alaska Village Initiatives (AVI)	8/17/10	3/31/11	$175,805	Westward (Kodiak)
45659	YRDFA: Fisheries Outreach & Advocacy	2005	The Yukon River Drainage Fisheries Association (YRDFA) will facilitate fishermen's involvement in management decisions, participate in decision-making forums, and cultivate coalitions between Yukon River groups and organizations. Staff will design and plan cooperative efforts to address fisheries management issues on the Yukon River, promoting healthy wild salmon fisheries in management forums.	Yukon River Drainage Fisheries Association (YRDFA)	11/1/09	3/31/10	$73,242	AYK (Yukon River)

Subtotals	
Southeast Region	$73,330,662
Central Region	$49,953,973
AYK Region	$14,667,570
Westward Region	$4,349,544
Cross-regional	$22,487,229
Pacific Northwest (cooperative Pacific Salmon Treaty projects)	$1,843,046
Grand Total (exclusive of AYK SSI Projects)	**$166,632,024**

Definitions of Acronyms used in AKSSF Project List

Acronym	Definition
ACWA	Alaska Clean Water Actions
ADF&G	Alaska Department of Fish and Game
AK	Alaska
AS	Alaska Statue
ASLC	Alaska SeaLife Center
ASMI	Alaska Seafood Marketing Institute
AVI	Alaska Village Initiatives
AYK	Arctic-Yukon-Kuskokwim
AYK SSI	Arctic-Yukon-Kuskokwim Sustainable Salmon Initiative
BBSRI	Bristol Bay Science and Research Institute
CIAA	Cook Inlet Aquaculture Association
CRITFC	Columbia River Inter-Tribal Fish Commission
DCCED	Department of Commerce, Community, and Economic Development
DCED	Department of Community and Economic Development
DEC	Department of Environmental Conservation
DIPAC	Douglas Island Pink and Chum
DNA	Deoxyribonucleic Acid
DNR	Department of Natural Resources
KRSA	Kenai River Sportfishing Association
KWC	Klawock Watershed Council
MOA	Municipality of Anchorage
MOU	Memorandum of Understanding
NSRAA	Northern Southeast Regional Aquaculture Association
PCSRF	Pacific Coastal Salmon Recovery Fund
POWHA	Prince of Wales Hatchery Association
PSA	Public Service Announcement
PSFMC	Pacific States Marine Fisheries Commission
PST	Pacific Salmon Treaty
SRA	Southeast Revitalization Association
SSI	Sustainable Salmon Initiative
SSRAA	Southern Southeast Regional Aquaculture Association
SSSF	Southeast Sustainable Salmon Fund
UFA	United Fishermen of Alaska
YRDFA	Yukon River Drainage Fisheries Association

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AYK Stocks of Concern Designations					
Area/Stock	**Salmon Species**	**BOF Sept. 2000**	**BOF Jan. 2004**	**BOF Feb. 2007**	**BOF Feb. 2010 Current Status**
		Level of Concern	**Level of Concern**	**Level of Concern**	**Level of Concern**
Norton Sound					
Subdistrict 1	Chum	Management	Management	Changed to Yield	Yield
Subdistricts 2 and 3	Chum	Yield	Yield	Yield	Yield
Subdistricts 5 and 6	Chinook	NA	Yield	Yield	Yield
Yukon River	Chinook	Yield	Yield	Yield	Yield
	Summer Chum	Management	Management	Discontinued	
	Fall Chum	Yield	Yield	Discontinued	
	Toklat Fall Chum	Management	Discontinued		
	Fishing Branch Fall Chum	Management	Discontinued		
Kuskokwim River	Chinook	Yield	Yield	Discontinued	
	Chum	Yield	Yield	Discontinued	
Number of Stocks		9	8	4	4

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October 19, 2011

Public Comment to the **Alaska State Legislature: House Special Committee on Fisheries**

Provided by:
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The Bering Sea Fishermen's Association began in 1979 with 150 fishermen from over 30 communities in western Alaska ranging from Bristol Bay to Kotzebue Sound. These fishermen united to become more involved in new fisheries that were developing in their backyard, and to build an organization that was concerned with helping rural fishermen gain full economic benefits from local commercial fisheries. Today BSFA is directed by a 13-member board made up of local fishermen from Bristol Bay, the Yukon, Kuskokwim, Norton Sound, Kotzebue and St. Paul.

Over the past 32 years, BSFA has been involved in a wide variety of ventures:

- We participated in developing the High Seas Driftnet Ban through the United Nations
- We played a leading role in the development of the Community Development Quota (CDQ) Program
- We helped Yukon River residents to organize the Yukon River Drainage Fisheries Association
- We created and implemented the Bristol Bay buy-back Coalition which, in 1995, achieved the Congressional buy-back of oil & gas leases
- We helped facilitate and assist with negotiations for the US/Canada Yukon River Salmon Agreement
- We've conducted niche marketing of Western Alaska salmon
- We initiated resource surveys and fisheries feasibility studies in the Chukchi Sea
- Lastly, though this list is far from comprehensive, we worked closely with regional native organizations to construct the Arctic-Yukon-Kuskokwim Sustainable Salmon Initiative

In addition to the list provided, which portrays a variety of remarkable achievements; BSFA also administers and directs salmon monitoring and scientific research.

Of great concern to our organization is the health and condition of our marine and freshwater ecosystems and the resources they support. These resources deal with a labyrinth of physical and biological relationships. They must survive the influences of human activities, climate variations and interactions between species. There are data that show we are experiencing a shift toward the scarcity of once-abundant resources, as evidenced by

what seemed like erratic short-term episodes, but are now looking like long-term declining populations of salmon.

More alarming than the declines themselves is the fact that as we embark on research ventures we've realized there are massive knowledge gaps and it will take some time to have real answers that fully explain the declines, work on strategies to prevent them in the future, and create tools to help manage in the interim.

In this era of chaos, we know one thing for sure; fishery managers MUST utilize improved involvement, reliance and connection to rural/native residents and communities.
We need managers to realize that improved involvement, reliance and connection means viewing regional residents as their colleagues, collaborators and even mentors.

We are all familiar with the fact that when livelihoods are disrupted by management decisions residents sometimes adopt confrontational postures, practice civil disobedience, or engage in outright sabotage. These are purely forms of communication. They are developed because previous forms of communication – slow, deliberate, sincere attempts – have not worked. These, more abrasive, forms of communication are costly and inefficient than the alternative of bringing people together into the data gathering, analysis, and decision-making process.

When residents contribute their traditional knowledge, seek and obtain considerable funding designed to support further research, and are able to participate in the process to generate solutions then you have an obligation and opportunity to harness that type of commitment. That opportunity is now. We want to see efforts, not just on our part, but on yours too that ensure the long-term viability of programs like the two I'm going to share with you now.

Western Alaska Salmon Monitoring

In the summer of 1993, many chum salmon runs in western Alaska unpredictably failed to return in expected numbers. The Department of Interior immediately provided funds to help monitor these runs with a caveat that communities and residents be full partners. BSFA administered these funds between 1994 and 2006.

Due to the changes in Washington DC, this necessary program has gone unfunded.

The greatest benefit of this program was that first, projects implemented with these funds were all coordinated with the Alaska Department of Fish and Game or the U.S. Fish and Wildlife Service. Second BSFA contracted with community based organizations, regional Native organizations and individual fishermen to partake in all projects to increase participation and engagement between regional residents/organizations and the state and federal entities.

It was the first AYK region-wide effort to involve rural communities and individuals in salmon monitoring projects. Additionally, funding provided seasonal employment of up to 175 jobs with training and mentoring programs for high-school students creating opportunities for youth to engage in the scientific research in their own communities.

I do not make mention of this program to take or give credit to BSFA. I mention it because the model was in place and at a much more diminished scale remains in place for various projects around the AYK. It is an investment in your constituents and it builds credibility and trust.

Credibility and trust.....two good words to help transition into talking about the next program: the **Arctic-Yukon-Kuskokwim Sustainable Salmon Initiative.**

Since 1997, the unexpected and dramatic declines of AYK salmon runs prompted 16 disaster declarations in different watersheds.

As a result, harvest restrictions have created tremendous hardships for the communities in a region with the highest subsistence dependence on salmon in the state, coupled with some of the lowest incomes in the state. In response to these declines, BSFA and regional Native organizations invited state and federal agencies to create the AYK SSI, a proactive science-based program working cooperatively to identify and address critical salmon research needs facing this region. Created via a Memorandum of Understanding in 2002, this innovative partnership includes: Association of Village Council Presidents; Tanana Chiefs Conference; Kawerak, Inc.; Bering Sea Fishermen's Association; Alaska Department of Fish and Game; National Oceanic and Atmospheric Administration; and the United States Fish & Wildlife Service. The AYK SSI is governed by an eight-member Steering Committee and advised by a six-member Scientific Technical Committee. U.S. Congress and the State of Alaska have appropriated $21.7 million to support the AYK SSI. We are a unique research program dedicated to understanding the causes of the declines of salmon across both the freshwater and marine ecosystems of the region, advancing research across the entire lifecycle of the salmon.

THIS, the AYK SSI, is what it takes and how fortunate we are that within the State of Alaska an initiative such as this exists.

By setting aside differences and working with common purpose, these seven partners have created one of the largest, most diverse collaborative research efforts to rebuild salmon runs on the entire North Pacific coast.

A few of the accomplishments of this effort include the following:

- We developed the AYK SSI Research and Restoration Plan. A strategic salmon science plan providing a roadmap which guides our "Requests for Proposals." By doing this we ensure that available funds target the highest priority research questions and issues. Our Research Plan was developed diligently with scientific

advice and guidance from the National Academy of Science/National Research Council.

- We partnered with the North Pacific Research Board and the Exxon Valdez Oil Spill Trustee Council to establish a rigorous external peer-review process overseen by our Scientific Technical Committee.
- We developed and applied a regional capacity-building program creating a new model by which rural communities and rural organizations can directly engage in fisheries research activities.
- We organized a fantastic Salmon Research Symposium that resulted in a peer-reviewed book entitled Pacific Salmon: Ecology and Management of Western Alaska's Populations.

While funding the highest quality salmon research, the AYK SSI remains focused on harnessing that research to understand the causes of AYK salmon declines and to support improved sustainable management of these stocks.

The AYK SSI Research Plan includes a core focus on the development of new fisheries management tools and the synthesis of information for improved forecasting.

I am going to highlight three projects currently underway to give you an idea of where our present priorities lie:

The first project is titled: ESCAPEMENT GOAL SETTING TO ENSURE SUSTAINABLE FISHERIES

Escapement goals and management strategies for salmon stocks in the AYK and around the state have been the subject of considerable controversy. Traditional methods of creating brood tables and using stock-recruitment curves are hampered by limited information. In recent years, new initiatives have been developed that incorporate uncertainty, habitat condition, life history, watershed biocomplexity, and evaluation of objectives other than maximum sustained yield.

We have established an Expert Panel that will offer advice on the most appropriate research approaches, management efforts and strategies for establishing effective harvest policies for AYK salmon stocks.

The second project is titled: HUMAN SYSTEMS AND SUSTAINABLE SALMON

For this effort, an Expert Panel is creating a model that incorporates various factors affecting AYK salmon harvests and uses.

The model is using quantitative data and assumptions about present and future conditions to predict future salmon harvests for subsistence, commercial, and sport uses in the AYK area in response to demographic, economic, cultural, and biological changes. It will predict harvest by use categories at the levels of drainage, major area, and stock. The model will predict possible future harvests under different future scenarios involving human

populations, salmon abundance, numbers of dog teams, monetary income, and many other factors. The benefit of this is to provide a kind of crystal ball related to outcomes of management decisions.

The third and last project is titled: RESEARCH PRIORITIES FOR AYK CHINOOK SALMON: REVIEW OF EXISTING INFORMATION AND IDENTIFICATION OF PRIORITIES FOR FUTURE RESEARCH
We are working to synthesize existing information and identify and evaluate a set of hypotheses that alone or in combination explain: 1) longer-term declines and; 2) shorter episodic declines as experienced in 1999-2000 or on the order of 2-4 years.

We will determine which variables, acting alone or in synergy, account for the declines. AYK Chinook salmon stocks, especially those in the Yukon and Unalakleet rivers, appear to be plagued for unknown reasons by a long period of low productivity, based on a number of years of much lower returns than predicted by the sibling model and stock-recruitment analyses. We are looking at whether or not the major stressors responsible for the declines are acting predominately in the freshwater phase versus the marine portion of the Chinook salmon life cycle. In addition, the project will describe a research pathway through a series of projects to answer these questions.

The AYK SSI Chinook Salmon Subcommittee requested a compilation of evidence for long-term declines and periodic low returns of AYK Region Chinook populations be completed.

For the Yukon River, the analysis of productivity indicates that the most recent period of low abundance which began in 2007, resulted from the low productivity of the 2002 – 2004 brood years (Figure 1). This low productivity approached one return per spawner. This means that in the absence of any fishing, the population is just barely able replace itself, with each spawner producing, on average, one prodigy surviving to return to the spawning grounds. With harvest, the population is below replacement.

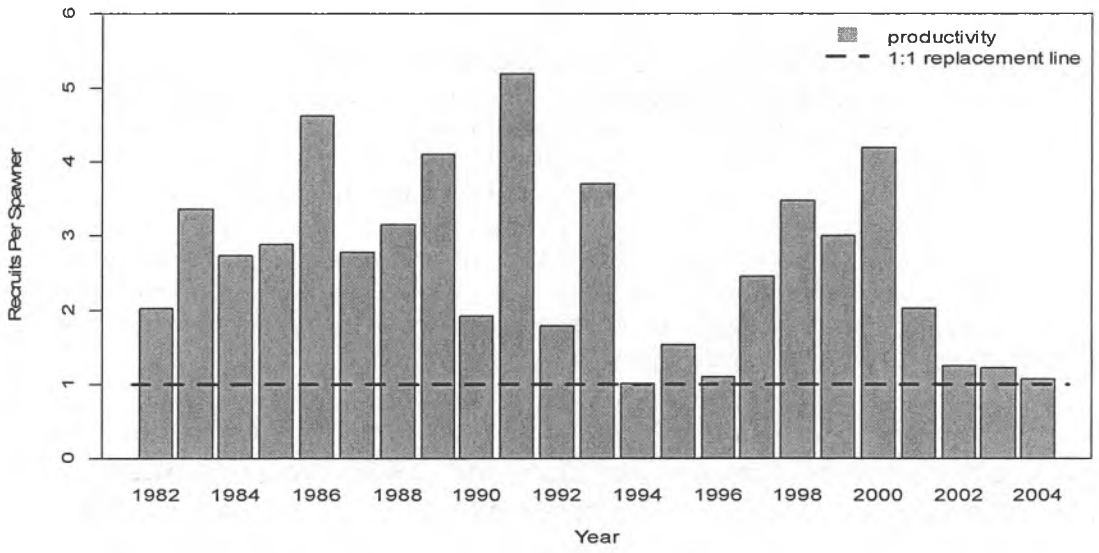


Figure 1: Brood-year productivity (recruits per spawner; bars) for Yukon River Canadian-Origin Chinook salmon, 1982-2004. Productivity was estimated by dividing the sum of returns from a given brood year by the escapement that produced them. Brood year is defined as the year of the escapement that gave rise to the subsequent returns. For example, the 1982 brood year productivity estimate was the sum age 3-7 salmon that returned from 1985 – 1989, respectively, divided by the escapement in 1982. Productivity from the 2004-2010 brood years were not estimable because those cohorts have not yet fully returned to the river. The horizontal dashed line depicts the productivity required for the population to replace itself. *Source:* JTC 2011

For the Kuskokwim River, with the exception of the unusually strong recruit per spawner ratio (productivity) from the 2000 brood year, the analysis shows periods of low productivity over the past 15 years (Figure 2). Between 1994- 2006, only two brood years had productivity levels greater than 2:1 and seven years during that period productivity fell below one recruit per spawner. Productivity from the 2004, 2005, and 2006 brood years was below the minimum replacement level of one recruit per spawner, producing the low trending run abundance in the past four years.

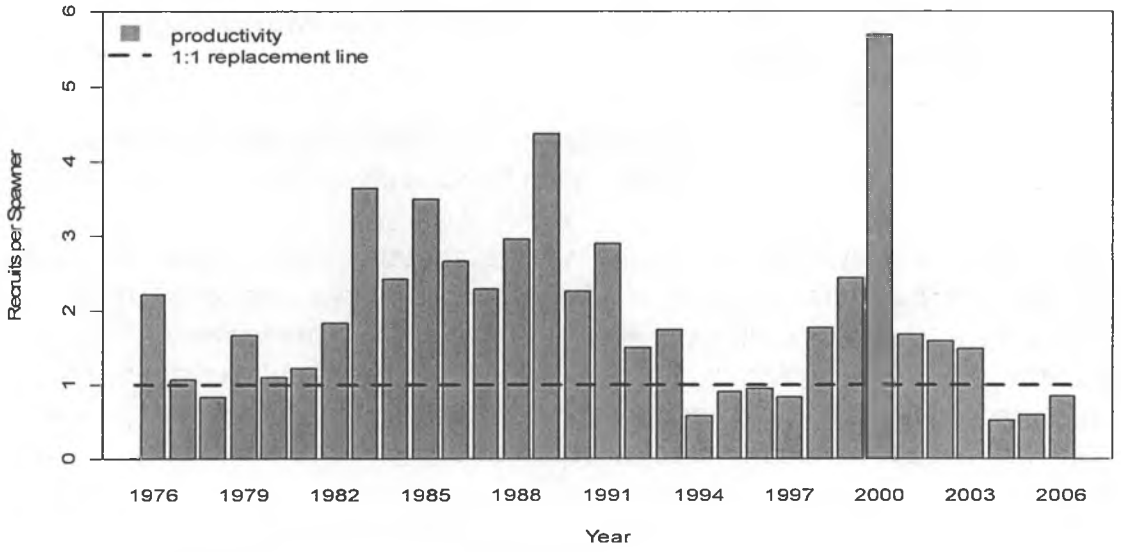


Figure 2: Brood-year productivity (returns per spawner; bars) of Kuskokwim River Chinook salmon, 1976-2006. Productivity was estimated by dividing the sum of returns from a given brood year by the escapement that produced them. Brood year is defined as the escapement year of the parents that gave rise to the subsequent returns (progeny of the parents) and is also known as year class. For example, the 1982 brood year productivity estimate was the sum of age 4-7 salmon that returned from 1985 – 1989, respectively, divided by the escapement in 1982. Productivity from the 2006-2010 brood years was not estimable because those cohorts have not yet fully returned to the river. The horizontal dashed line depicts the productivity required for the population to replace itself. *Source:* Douglas Molyneaux, personal communication.

I've provided quite a bit of information, but what it boils down to is this within the framework of the Western Alaska Salmon Monitoring and AYK SSI programs, Alaska can willingly chart the course for shared success across the North Pacific and safeguard Alaska's treasured salmon runs and the thousands of people whose livelihoods depend on them.

I am certain that at the end of the day we all want the same thing: resources that are physically healthy and abundant in numbers.

It is exciting to be a part of Alaska's progress toward genuinely involving stakeholders in the process of managing. The efforts underway will provide our state with new tools that do not just focus on the population's status in order to achieve the mandated management goals but that help to understand that the decisions we make have consequences and risk associated with them. The ultimate goal is to focus on understanding and rebuilding salmon stocks.

We are currently not mandated to participate in a tribal/state co-management format like the Pacific Northwest. We believe in the value of our contributions and want to see them respected, encouraged and funded. We will continue to reach out and invite the State of Alaska to realize the potential that collaboration achieves.

Fisheries are high-risk enterprises. Numbers and markets do rise and ebb, and at the low ranges in fish numbers, there is economic pain. In much of western Alaska in the recent past, and this year too, people are suffering from exceedingly low numbers. The pain, therefore, both economic and psychological, is severe.

Nevertheless, look around....we have you, our legislators, who are deeply concerned with the fate of AYK salmon. We have a new commissioner and invested ADFG personnel who I believe are all committed to raising the bar of understanding in AYK. We have stakeholders who work day in and day out to provide, sometimes in a curious way, solutions, questions and even criticism that is designed to garner attention and help others to see things from their on-the-ground perspective. These are all notably good things.

Many current fishery problems are the legacy of a misplaced belief in the resiliency or inexhaustibility of our resources. Our task and yours requires the involvement of every person, from doctors of science to subsistence users to commit themselves to implementation of the idea of healthy and abundant salmon stocks for generations to come.

This will only be achieved by working together.

----------END OF TESTIMONY----------

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ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF COMMERCIAL FISHERIES
NEWS RELEASE

Cora Campbell, Commissioner
Jeff Regnart, Director



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Date Issued: 9/30/11

2011 Preliminary Yukon River Summer Season Summary

This informational letter provides a preliminary summer season summary of the 2011 Yukon Area Chinook and summer chum salmon fisheries. Subsistence and personal use harvests for 2011 are not available at this time. For management purposes, the Yukon River is divided into several fishing districts and subdistricts (Figure 1).

2011 Preseason Outlook

Chinook Salmon

The total Yukon River Chinook salmon run can be estimated by applying historical average proportions of Canadian-origin fish in the total run to the outlook estimated for the Canadian component of the run. The average proportion of Canadian origin fish in the total run is approximately 50%. The 2011 preseason outlook for Canadian-origin Chinook salmon, as adopted by the Joint Technical Committee of the Yukon River Panel (JTC 2011) was 65,000 to 89,000 fish. Therefore, the drainage-wide run outlook based on this Canadian-origin model estimate, which attempts to account for low productivity since 2007, was 130,000–178,000 Chinook salmon. Thus, the 2011 Yukon River Chinook salmon run would likely be poor to below average.

It was therefore prudent to enter the 2011 season with the outlook that conservation measures would be required during the subsistence fisheries in an effort to share the available subsistence harvest and meet escapement goals. It was unlikely that there would be a directed Chinook salmon commercial fishery in 2011 on the mainstem river, but there was a potential opportunity to commercially harvest less than 1,000 Chinook salmon on the Tanana River because the Tanana River is managed independently as a terminal fishery.

Summer Chum Salmon

Yukon River summer chum salmon generally exhibit strong run size correlations among adjacent years, and it was expected that the total run in the Yukon River would be similar to the 2010 run

of approximately 1.6 million fish. In 2010 there was a good showing of age-3 fish from the 2007 brood year which indicated an upward trend in run size if the number of age-4 fish returning in 2011 was above average. The high seas Bering Arctic Subarctic Integrated Surveys (BASIS) study indicated a decline in chum salmon in 2004 and 2005, but 2006 and 2007 results showed an increase in abundance. No BASIS survey was conducted in 2008. Chum salmon collected in the BASIS study in 2007 would correspond to the age-5 returns in 2011. A collaborative effort between ADF&G and NOAA is in progress to test the applicability of BASIS juvenile salmon indices for run size forecasting.

The 2011 summer chum salmon run was expected to be average and was anticipated to provide for escapements, a normal subsistence harvest, and a surplus for commercial harvest. Summer chum salmon runs have provided for a harvestable surplus in each of the last 8 years (2003–2010). The commercially harvestable surplus was expected to range from 300,000 to 600,000 summer chum salmon. The actual commercial harvest of summer chum salmon in 2011 was anticipated to be affected by conservative management actions taken to protect a potentially poor Chinook salmon run, because Chinook salmon are incidentally harvested in chum salmon directed fisheries.

2011 Preseason Management Strategy

Chinook and summer chum salmon management plans guide ADF&G management actions. Because of recent poor Chinook salmon runs, the Yukon River Drainage Fisheries Association (YRDFA) facilitated an in-person preseason meeting to provide managers, fishermen, tribal council representatives, and other stakeholders the opportunity to share information, provide input, and discuss management options. The purpose of the meeting was to work cooperatively to identify options and management strategies for 2011 that would assist in getting adequate numbers of fish to the spawning grounds, particularly to Canada, should the Chinook salmon run be similar to the unexpected low runs of 2007 and 2008. Based on input from this meeting, a preseason management plan was developed for the Yukon River summer season fishery. The preseason plan included the following key components.

- Initial management would be based on preseason projections and shift to inseason assessment information as runs developed.
- Escapement in both Alaska and Canada would be maintained as the highest management priority, with the Canadian Interim Management Escapement Goal (IMEG) of 42,500–55,000 Chinook salmon as the highest concern.
- The preseason border passage target was 50,000 Chinook salmon based upon the IMEG and harvest sharing agreement.
- Providing for subsistence fishing opportunity would remain the highest priority use.
- It was unlikely there would be any directed Chinook salmon commercial openings.
- The regulatory subsistence salmon fishing schedule would begin June 6 in District 1 and be implemented chronologically with the upriver migration.
- To conserve the greatest number of Canadian-origin Chinook salmon, fishing time on the first pulse of Chinook salmon would be reduced. Beginning in District 1, one fishing period would be closed (approximately 5-day closure) and this action would be similarly implemented in upriver fishing districts and subdistricts based on migratory timing.
- If inseason assessment indicated Chinook salmon run strength continued to be poor after closing the first period, an additional period may be closed or subsistence fishing time may be reduced.

- In the sport fishery for Chinook salmon, the bag and possession limit in Yukon River tributaries (excluding the Tanana River drainage) would be reduced from three to one fish. No retention of Chinook salmon would be permitted in the mainstem Yukon River.
- The Tanana River personal use and sport fisheries would be managed to meet escapement objectives for Chena and Salcha rivers.
- A surplus of summer chum salmon was anticipated above escapement and subsistence needs. However, the extent of a directed chum commercial fishery would be dependent upon the strength of the Chinook salmon run.
- No sale of incidental Chinook salmon harvested during summer chum commercial fishing periods was anticipated.
- Beginning in 2011, in **Districts 1-6** and the **Coastal District**, which includes the villages of Chevak, Hooper Bay, and Scammon Bay, a person may not take salmon with a gillnet that has a mesh size larger than 7.5 inches. Fishermen can use a mesh size of 7.5 inches or less.

Since 2001, the subsistence salmon fishery has operated on a schedule established by the Board of Fisheries and implemented by ADF&G, which is chronologically consistent with migratory timing as the run progresses upstream. Subsistence fishing is open 7 days per week until the schedule is established. The subsistence salmon fishing schedule is based on current or past fishing schedules and provides reasonable opportunity for subsistence salmon fishing during years of normal to below average runs. The objectives of the schedule are to: 1) reduce harvest early in the run when there is a higher level of uncertainty, 2) spread the harvest throughout the run to reduce harvest impacts on any particular component of the run, and 3) distribute subsistence fishing opportunity among all users during years of low salmon runs.

Table 1.–Yukon Area subsistence salmon fishing schedule, 2011.

Note: this schedule was subject to change depending on run strength.

Area	Reduced Regulatory Subsistence Fishing Periods	Approximate Schedule to Begin	Days of the Week
Coastal District	7 days/week	All Season	M/T/W/TH/F/SA/SU – 24 hours
District Y-1	Two 36-hour periods/week	June 6	Mon. 8 pm to Wed. 8 am /Thu. 8 pm to Sat. 8 am
District Y-2	Two 36-hour periods/week	June 8	Wed. 8 pm to Fri. 8 am / Sun. 8 pm to Tue. 8 am
District Y-3	Two 36-hour periods/week	June 12	Wed. 8 pm to Fri. 8 am / Sun. 8 pm to Tue. 8 am
Subdistrict Y-4-A	Two 48-hour periods/week	June 15	Sun. 6 pm to Tue. 6 pm / Wed. 6 pm to Fri. 6 pm
Subdistricts Y-4-B, C	Two 48-hour periods/week	June 22	Sun. 6 pm to Tue. 6 pm / Wed. 6 pm to Fri. 6 pm
Koyukuk and Innoko Rivers	7 days/week	All Season	M/T/W/TH/F/SA/SU – 24 hours
Subdistricts Y-5-A, B, C	Two 48-hour periods/week	June 28	Tue. 6 pm to Thu. 6 pm /Fri. 6 pm to Sun. 6 pm
Subdistrict Y-5-D	7 days/week	All Season	M/T/W/TH/F/SA/SU – 24 hours
District Y-6	Two 42-hour periods/week	All Season	Mon. 6 pm to Wed. Noon /Fri. 6 pm to Sun. Noon
Old Minto Area	5 days/week	All Season	Friday 6 pm to Wednesday 6 pm

2011 Assessment

The department monitors a suite of assessment projects that provide critical salmon run timing, relative abundance, and stock composition information. Inseason run assessment includes abundance indices from test fisheries, sonar passage estimates, subsistence and commercial

harvest data, and age, sex, and length (ASL) data. In addition, genetic samples collected were analyzed inseason to investigate stock contribution for both chum and Chinook salmon. Information from multiple assessment projects were corroborated when possible to provide the best possible assessment.

Initial assessment in the lower river is critical to implementing an inseason management plan to operate an orderly fishery throughout the drainage. Three projects on the lower river provide inseason abundance and timing information: the Lower Yukon Test Fishery (LYTF), a set net project designed primarily designed to assess Chinook salmon run timing operated near Emmonak; a summer chum salmon directed drift gillnet test fishery using 5.5 inch mesh; and the Pilot Station sonar which provides mainstem abundance estimates for Chinook and summer chum salmon.

Breakup occurred in the lower river on May 22, which is average. The LYTF was operational at the Big Eddy site on May 30 and at the Middle Mouth site on June 2. On June 3, the first Chinook salmon was caught in the LYTF and the first Chinook salmon subsistence catch was reported in the lower river. An early group of Chinook and chum salmon entered the river from June 5 through June 9 as indicated by an increase in catch rates recorded by the LYTF and reports from subsistence fishermen. Due to difficulties experienced at Big Eddy caused by high water and excessive drift, additional drift test fishing was conducted throughout the season in the South Mouth with 8.25 inch mesh gillnets for Chinook salmon to supplement set gillnet test fishing catches. The first pulse of Chinook salmon was observed in the LYTF project on June 14–18, a second pulse on June 20-23, and a third on June 27–31. The LYTF concluded operations on July 14 with a cumulative CPUE of 15.34, which was below the average of 22.49 at this date. The first quarter point, midpoint, and third quarter point were June 16 (1 day late), June 21 (1 day early), and June 28 (average) respectively.

The Pilot Station sonar project preliminary cumulative passage estimate was 107,300 Chinook salmon, compared to the average[1] of about 159,000. The first quarter point, midpoint, and third quarter point were on June 19, June 23, and July 1 respectively. The sonar assessment provided an estimate for the first pulse of Chinook salmon of approximately 20,800 fish. The estimate for the second pulse was about 37,000 fish and the third pulse came in lower than anticipated at 17,300 fish.

The summer chum salmon drift project in the Lower Yukon River indicated pulses entering the mouth on approximately June 5, June 14, June 20, and June 28. The largest of these pulses passed Pilot Station sonar on June 21 and contained approximately 580,300 summer chum salmon. The summer chum salmon run comprised approximately 1.8 million fish passing Pilot Station sonar, which was above the median of 1.3 million for the project. The first quarter point, midpoint, and third quarter point were June 22, June 26, and July 4, respectively.

Though management actions are initially implemented based upon the lower river monitoring projects, assessment continues upriver using tools such as test fish wheels, subsistence harvest reports, weirs, counting towers, aerial surveys, and sonar projects. All projects along the Yukon River and its tributaries contribute to informing management actions.

[1] Average includes years 1995, 1997, 1999, 2002-2008, and 2010. The sonar did not operate in 1996 and project difficulties occurred in 2000, 2001, and 2009.

2011 Subsistence Fishery

According to preseason management strategies and inseason assessment through the early portion of the run, the Chinook salmon run was expected to be large enough to provide for escapement but not large enough to meet subsistence needs.

Consistent with preseason management strategies, a conservative management plan was initiated in District 1 and the northern portion of the Coastal District on June 13. Based upon historical run timing and the current inseason information, a subsistence salmon fishing period was cancelled to protect the first pulse of Chinook in each fishing district and subdistrict based on migratory timing. As the run developed it became evident that the Chinook salmon run size would likely be at or below the lower end of preseason projections. Consequently, it was necessary to protect the second pulse of Chinook salmon. An additional two subsistence periods were reduced by half in District 1 and an additional subsistence period in Districts 2-5 was cancelled to ensure that escapement goals were met (Table 2).

Furthermore, beginning June 27 in District 1 and June 29 in District 2, the mesh size during subsistence fishing periods was restricted to six inch or smaller for the remainder of the summer season to provide further protection on the third pulse of Chinook salmon as it passed through the districts. This management action was taken with the intent that Chinook salmon incidentally harvested during summer chum directed commercial fishing periods in these districts would be used for subsistence purposes, which would help offset a reduction in subsistence fishing opportunity (Table 2).

Some subsistence fishermen were able to take advantage of the early Chinook salmon throughout the drainage, but many delayed harvest effort, preferring better processing weather and higher abundance later in the run. Preliminary reports from fishermen indicate that management actions taken later in the run to reduce the subsistence harvest of Chinook salmon resulted in many fishermen throughout the drainage not meeting there subsistence needs. Subsistence harvest surveys are currently being conducted by the department and the 2011 harvest information is not available at this time.

2011 Commercial Fishery

Due to the uncertainty concerning Chinook salmon run strength and the need to fulfill the Canadian border passage obligation, meet Alaska escapement needs, and provide for subsistence uses, management of the Chinook salmon commercial fishery continued to follow the conservative preseason management strategy. No commercial periods targeting Chinook salmon were allowed in 2011 in the Yukon River mainstem or in the Tanana River.

In an effort to reduce incidental harvest of Chinook salmon during a poor run, management actions regarding the summer chum commercial salmon fishery were delayed until near the midpoint in the Chinook salmon run at LYTF. At that time, a harvestable surplus of summer chum had been identified as a total run size of approximately 2 million summer chum salmon was projected based on Pilot Station sonar. The first summer chum directed commercial periods took place June 24 in District 1 and June 26 in District 2. Gillnet gear was restricted to 6-inch or smaller mesh. Concurrent subsistence and commercial fishing periods in Districts 1 and 2 were instituted intermittently throughout the season, primarily early in the summer chum salmon commercial season when the subsistence schedule was still in effect. The intent of these

concurrent openings was to decrease the amount of time that Chinook salmon were susceptible to harvest (Table 3).

When it appeared the third pulse of Chinook salmon was not developing as expected, the department took further measures to provide commercial summer chum salmon harvest opportunities while still protecting Chinook salmon. The area open in the third, fourth, fifth, and sixth periods in District 1 was restricted to the South Mouth only. This action was taken because Chinook salmon abundance was low in the South Mouth and Chinook salmon were entering the river primarily through the North and Middle mouths throughout the season. The area open to commercial fishing included waters from the lower point of Head of Passes downstream to Chris Point, both of which were identified by an ADF&G regulatory markers, and included Black River, Kwiguk Pass, and coastal waters from Chris Point to one mile north of Kwiguk Pass. North and Middle Mouth passes north of the mainstem south mouth were closed to commercial fishing. The third commercial fishing period in District 2 was delayed until July 6 because of the high abundance of Chinook salmon in the district. Once it was expected that most of the third pulse of Chinook salmon was in the upstream portion of District 2, the department scheduled two periods in which the fishing area was limited to downstream of the Andreafsky River (period 3), and from downstream of the slough at Pilot Station (period 4). The department scheduled eleven commercial fishing periods in District 1 and nine in District 2.

The sale of incidentally caught Chinook salmon was not allowed during the summer season because subsistence fishing had been restricted during the season in Districts 1-5, and this action helped ensure escapement goals would be met. Fishermen could release any incidentally caught live Chinook salmon or use them for subsistence purposes. It was required to report on fish tickets any Chinook salmon caught but not sold. A total of 4,083 Chinook salmon were incidentally harvested in Districts 1 and 2 during the summer season. The prohibition of Chinook salmon sales was lifted partway through the fall season. A total of 35 Chinook salmon were caught but not sold and 64 Chinook salmon were sold in District 1, and 45 Chinook salmon were caught and sold in District 2 in the fall season (Tables 3 and 4). The preliminary cumulative summer chum salmon harvest for Districts 1 and 2 combined was 266,510 fish (Table 3). The summer chum salmon harvest was 214% above the 2001–2010 average harvest of 84,764 fish (Table 5).

In Subdistrict 4-A, one buyer had expressed interest in harvesting summer chum salmon prior to the season, but withdrew interest just before the season would have begun. Because there were no buyers interested in this area, there were no commercial fishing periods scheduled.

District 6 is managed using inseason assessment information provided by multiple projects operated in the Tanana River drainage. Run assessment was difficult this season due to high water and drift that hampered the operation of projects on the Chena, Salcha and Goodpaster Rivers. However, a harvestable surplus of summer chum salmon was identified based upon subsistence harvest information and the Nenana test fish wheel, as well as indications from lower river genetics and assessment data. Based upon this surplus and market interest, the department scheduled the first commercial fishing period to target chum salmon in District 6 on July 18. As in Districts 1 and 2, the sale of incidentally caught Chinook salmon was not allowed. The department scheduled eleven commercial fishing periods and the preliminary cumulative harvest was 8,651 summer chum salmon (Table 3).

The total commercial harvest for Districts 1, 2, and 6 combined was 275,161 summer chum salmon, which is 163% above the 2001-2010 average harvest of 104,579 fish (Table 5).

2011 Fishing Effort and Exvessel Value

A total of 408 permit holders participated in the summer chum salmon fishery, approximately 15% below the 2001–2010 average of 532 permit holders (Table 6). The Lower Yukon Area (Districts 1–3) and Upper Yukon Area (Districts 4–6) are separate Commercial Fisheries Entry Commission (CFEC) permit areas. A total of 403 permit holders fished in the Lower Yukon Area in 2011, which was approximately 21% below the 2001–2010 average of 513. In the Upper Yukon Area, 5 permit holders fished, which was approximately 71% below the 2001–2010 average of 17.

Yukon River fishermen in Alaska received an estimated $1.3 million for their summer chum salmon harvest in 2011, approximately 438% above the 2001–2010 average of $244,000 (Table 7). Lower Yukon River fishermen received $0.75 for summer chum salmon. The estimated average income for Lower Yukon Area fishermen in 2011 was $3,221.

Upper Yukon Area fishermen received an average of $0.26 per pound for summer chum salmon sold in the round. The average price paid in the Upper Yukon Area was slightly above the 2001–2010 average of $0.25 per pound (Table 7). No Chinook salmon were sold in the Upper Yukon Area. The average income for Upper Yukon Area fishermen that participated in the 2011 fishery was $2,593.

2011 Age and Sex Composition

Test Fisheries

The Chinook salmon age composition from the 8.5 inch LYTF set nets through the end of season was 1% age-4, 32% age-5, 63% age-6, and 4% age-7 fish. The sample size was 999 fish. The percentages of age-5 and age-6 fish were near average and females comprised 52% of the sample, also average.

The summer chum salmon age composition from the 5.5 inch LYTF drift nets through the end of season was less than 1% age-3, 44% age-4, 56% age-5, and less than 1% age-6 fish. The sample size was 1,493 fish. The percentage of age-4 fish was average and the percentage of age-5 fish were slightly above average. Females comprised 63% of the sample, which is above average.

The Chinook salmon age composition from the 7.5 inch Mountain Village drift gillnet test fishery was 1% age-4, 59% age-5, and 39% age-6 fish. The sample size was 370 fish. Females comprised 32% of the sample.

The summer chum salmon age composition from the 5.5 inch Dall Point drift gillnet test fishery was 57% age-4 and 43% age-5 fish. The sample size was 205 fish. Females comprised 22% of the sample.

Age composition data from other projects are not yet available.

Subsistence Harvest

Samples from the subsistence harvest in Districts 1 and 2 were obtained throughout the season from subsistence fishermen working in conjunction with the Association of Village Council Presidents (AVCP). The Chinook salmon age composition from the Districts 1 and 2 subsistence harvest was 8% age-4, 67% age-5, 25% age-6, and 1% age-7 fish. The sample size was 254 fish. Females comprised 19% of the sample.

Commercial Harvest

The Chinook salmon age composition, sampled from the incidental catch during the Districts 1 and 2 commercial harvest was 38% age-4, 41% age-5, 20% age-6, and 1% age-7 fish. The sample size was 431 fish. Females comprised 18% of the sample.

The summer chum salmon age composition from the Districts 1 and 2 commercial harvest was less than 1% age-3, 53% age-4, 46% age-5, and 1% age-6 fish. The sample size was 1,731 fish. Females comprised 41% of the sample.

The summer chum salmon age and sex composition from the District 6 commercial harvest are not available at this time.

2011 Escapement

Chinook Salmon

Chinook salmon escapement goals for the East Fork and West Fork Andreafsky Rivers were achieved. However, the Anvik River escapement goal was not met. Season cumulative counts on the Gisasa and Henshaw Rivers were above average. High water conditions on the Chena, Salcha, and Goodpaster Rivers precluded counting for much of the season. Aerial surveys of the Salcha River were conducted July 21 and July 25. A total of 3,537 Chinook salmon were counted during these surveys, which meets the lower end of the Salcha River Tower escapement goal for this system. Preliminary Chinook salmon passage at Eagle sonar is 50,780 fish, yielding a preliminary border passage of approximately 49,780 fish. These numbers, however, are subject to change with post season data analysis. Selected 2011 escapement estimates for tributaries with goals were as follows:

Stream	Current Goal	Type of Goal	2011 Escapement
East Fork Andreafsky River Weir	2,100–4,900	SEG	5,213
West Fork Andreafsky River Aerial	640–1,600	SEG	1,173
Anvik River Index Aerial	1,100–1,700	SEG	501
Nulato River Aerial (Forks Combined)	940–1,900	SEG	1,401
Chena River Tower	2,800–5,700	BEG	195[1]
Chena River Aerial	N/A		449
Salcha River Tower	3,300–6,500	BEG	N/A
Salcha River Aerial	N/A		3,537
Canadian Border	42,500–55,000	IMEG[2]	49,780[3]

[1] Project operations were hindered by high water conditions for much of the season.

[2] The US/Canada Yukon River Panel agreed to a 1-year Canadian Interim Management Escapement Goal (IMEG) of 42,500–55,000 Chinook salmon based on the Eagle sonar program. In order to meet this goal, the passage at Eagle sonar must include a minimum of 42,500 fish for escapement, provide for a subsistence harvest in the community of Eagle upstream of the sonar (approximately 1,000-2,000 fish), and incorporate Canadian harvest sharing as dictated in the US/Canada Yukon River treaty (20%-26% of the total allowable catch).

[3] Data are preliminary.

Summer Chum Salmon

Most summer chum salmon producing tributaries experienced above average escapement. The East Fork Andreafsky SEG and Anvik BEG were achieved. Counts at the Gisasa and Henshaw Rivers were above average. Salcha River escapement as assessed by tower counts was near average; however, because this project experienced problems due to high water conditions, it is likely that these counts were very conservative. Escapement on the Chena River was impossible to assess because of environmental conditions. Selected 2011 escapement estimates for tributaries were as follows:

Stream	Current Goal	Type of Goal	2011 Escapement
East Fork Andreafsky River Weir	> 40,000	SEG	100,473
Anvik River Sonar	350,000-750,000	BEG	642,527
Gisasa River Weir	N/A		95,796
Henshaw Creek Weir	N/A		248,247
Chena River Tower	N/A		333[1]
Chena River Aerial	N/A		4,600
Salcha River Tower	N/A		31,002
Salcha River Aerial	N/A		1,107

[1] Project operations were hindered by high water conditions for much of the season.

Canadian Fisheries

The preseason outlook was for a run of approximately 65,000 to 89,000 Canadian-origin Chinook salmon, and Canadian fishery managers conducted Chinook salmon fisheries according to available abundance and international harvest sharing provisions. Based on the projected border passage of between 31,000 and 51,000 Chinook salmon, Department of Fisheries and Oceans (DFO) managers classified the Chinook salmon run to be in the "yellow zone", which indicates that some fisheries would be restricted to ensure an adequate spawning escapement. First Nations fishermen were asked to reduce their harvest to about two-thirds of normal. Beginning July 9, the sport fishery catch was varied to zero, and beginning July 29 all angling was closed on Tatchun Creek. Once it was projected that Chinook salmon border passage would meet escapement and subsistence harvest needs, DFO informed First Nations fishermen that they could harvest Chinook salmon at their normal level, and restrictions on the sport fishery were relaxed. The domestic and commercial fishery remained closed throughout the season. The First Nation harvest is approximately 3,600 Chinook salmon to date.

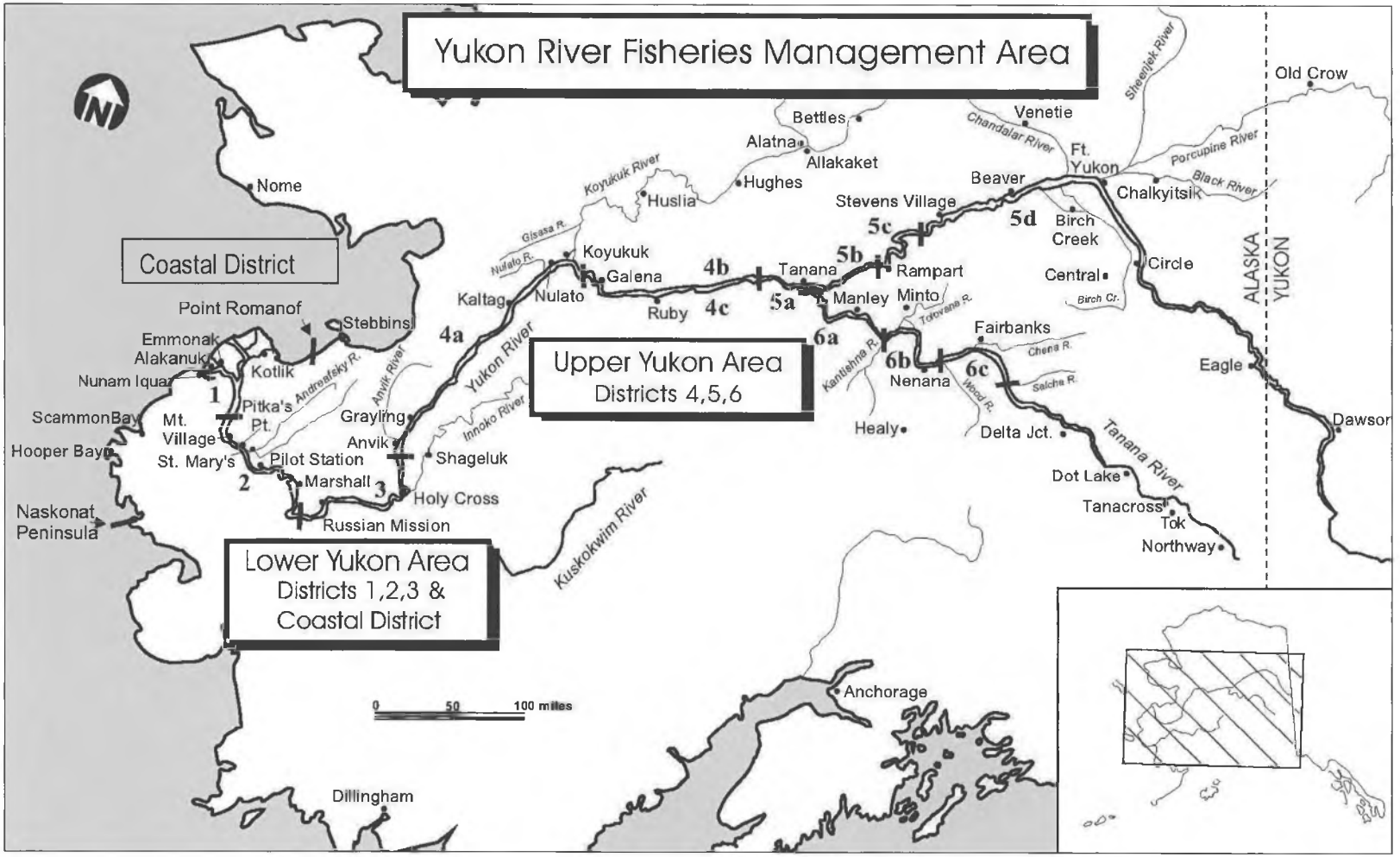


Figure 1.–Yukon Area communities and fishing districts.

Table 2.–2011 Yukon River summer season subsistence fishing schedule.

		Lower Yukon River					Upper Yukon River								Tanana
		Coastal District		District 1	District 2	District 3	Sub. 4A Lower	Sub. 4A Upper	Sub 4B / 4C	Sub 5A/5B / 5C	Sub 5D Lower	Sub. 5D Middle	Sub. 5D Upper below Charley River	Sub. 5D Upper above Charley River	District 6
		Northern	Southern												
Wed	1-Jun	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	
Thu	2-Jun	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Closed
Fri	3-Jun	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open 6 p.m.
Sat	4-Jun	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open
Sun	5-Jun	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Close 12 noon
Mon	6-Jun	Open/6 in. max	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open 6 p.m.
Tue	7-Jun	Open/6 in. max	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open
Wed	8-Jun	Open/6 in. max	Open	Close 8 a.m.	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Close 12 noon
Thu	9-Jun	Open/6 in. max	Open	Open 8 p.m.	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Closed
Fri	10-Jun	Open/6 in. max	Open	Open	Close 8 a.m.	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open 6 p.m.
Sat	11-Jun	Open/6 in. max	Open	Closed	Closed	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open
Sun	12-Jun	Open/6 in. max	Open	Closed	Open 8 p.m.	Open	Open	Open	Open	Open	Open	Open	Open	Open	Close 12 noon
Mon	13-Jun	Open	Close 8 p.m.	Closed	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open 6 p.m.
Tue	14-Jun	Open	Closed	Closed	Close 8 a.m.	Close 8 a.m.	Open	Open	Open	Open	Open	Open	Open	Open	Open
Wed	15-Jun	Open	Closed	Closed	Closed	Open 8 p.m.	Open	Open	Open	Open	Open	Open	Open	Open	Close 12 noon
Thu	16-Jun	Open	Open 2 p.m.	Open 8 p.m.	Closed	Open	Open	Open	Open	Open	Open	Open	Open	Open	Closed
Fri	17-Jun	Open	Open	Open	Closed	Close 8 a.m.	Close 6 p.m.	Close 6 p.m.	Open	Open	Open	Open	Open	Open	Open 6 p.m.
Sat	18-Jun	Open	Open	Close 8 a.m.	Closed	Closed	Closed	Closed	Open	Open	Open	Open	Open	Open	Open
Sun	19-Jun	Open	Open	Closed	Open 8 p.m.	Closed	Open 6 p.m.	Open 6 p.m.	Open	Open	Open	Open	Open	Open	Close 12 noon
Mon	20-Jun	Open	Open	Closed	Open	Closed	Open	Open	Open	Open	Open	Open	Open	Open	Open 6 p.m.
Tue	21-Jun	Open	Open	Open 2 p.m.	Close 8 a.m.	Closed	Close 6 p.m.	Close 6 p.m.	Open	Open	Open	Open	Open	Open	Open
Wed	22-Jun	Open	Open	Close 8 a.m.	Closed	Open 8 p.m.	Closed	Open 6 p.m.	Open	Open	Open	Open	Open	Open	Close 12 noon
Thu	23-Jun	Open	Open	Closed	Closed	Open	Closed	Open	Open	Open	Open	Open	Open	Open	Closed
Fri	24-Jun	Open	Open	Open 6 p.m.	Closed	Close 8 a.m.	Closed	Close 6 p.m.	Close 6 p.m.	Open	Open	Open	Open	Open	Open 6 p.m.
Sat	25-Jun	Open	Open	Close 12 noon	Closed	Closed	Closed	Closed	Closed	Open	Open	Open	Open	Open	Open
Sun	26-Jun	Open	Open	Closed	Open 8 p.m.	Closed	Open 6 p.m.	Closed	Open 6 p.m.	Open	Open	Open	Open	Open	Close 12 noon
Mon	27-Jun	Open	Open	Open 8 p.m.	Open	Closed	Open	Closed	Open	Open	Open	Open	Open	Open	Open 6 p.m.
Tue	28-Jun	Open	Open	Open	Close 8 a.m.	Closed	Close 6 p.m.	Closed	Close 6 p.m.	Open	Open	Open	Open	Open	Open
Wed	29-Jun	Open	Open	Close 8 a.m.	Open 8 p.m.	Open 8 p.m.	Closed	Open 6 p.m.	Closed	Close 8 p.m.	Open	Open	Open	Open	Close 12 noon
Thu	30-Jun	Open	Open	Open 8 p.m.	Open	Open	Closed	Open	Closed	Closed	Open	Open	Open	Open	Closed
Fri	1-Jul	Open	Open	Open	Close 8 a.m.	Close 8 a.m.	Closed	Close 6 p.m.	Closed	Closed	Open	Open	Open	Open	Open 6 p.m.
Sat	2-Jul	Open	Open	Close 8 a.m.	Closed	Closed	Closed	Closed	Closed	Closed	Open	Open	Open	Open	Open
Sun	3-Jul	Open	Open	Closed	Open 8 p.m.	Open 8 p.m.	Open 6 p.m.	Closed	Open 6 p.m.	Closed	Close 6 p.m.	Open	Open	Open	Close 12 noon
Mon	4-Jul	Open	Open	Open 8 p.m.	Open	Open	Open	Closed	Open	Open 6 p.m.	Closed	Open	Open	Open	Open 6 p.m.
Tue	5-Jul	Open	Open	Open	Close 8 a.m.	Close 8 a.m.	Close 6 p.m.	Closed	Close 6 p.m.	Open	Closed	Open	Open	Open	Open
Wed	6-Jul	Open	Open	Close 8 a.m.	Open 8 p.m.	Open 8 p.m.	Open 6 p.m.	Open 6 a.m.	Closed	Close 6 p.m.	Closed	Open	Open	Open	Close 12 noon
Thu	7-Jul	Open	Open	Open 2 p.m.	Open	Open	Open	Open	Closed	Closed	Closed	Close 6 p.m.	Open	Open	Closed
Fri	8-Jul	Open	Open	Close 2 a.m.	Close 8 a.m.-4pm	Close 8 a.m.	Close 6 p.m.	Close 6 p.m.	Closed	Closed	Open 6 p.m.	Closed	Open	Open	Open 6 p.m.
Sat	9-Jul	Open	Open	Close 8 a.m.	Close 9 p.m.	Closed	Closed	Closed	Closed	Closed	Open	Closed	Open	Open	Open
Sun	10-Jul	Open	Open	Close 4 p.m.	Closed	Open 8 p.m.	Open 6 p.m.	Open 6 p.m.	Open 6 p.m.	Closed	Open	Closed	Open	Open	Close 12 noon
Mon	11-Jul	Open	Open	Closed	Open 12-6pm	Open	Open	Open	Open	Open 6 p.m.	Close 6 p.m.	Closed	Open	Open	Open 6 p.m.
Tue	12-Jul	Open	Open	Open 10 a.m.	Open 2 p.m.	Close 8 a.m.	Close 6 p.m.	Close 6 p.m.	Close 6 p.m.	Open	Closed	Open 6 p.m.	Close 6 p.m.	Close 6 p.m.	Open
Wed	13-Jul	Open	Open	Close 8 a.m. open noon	Close noon	Open 8 p.m.	Open 6 p.m.	Open 6 p.m.	Open 6 p.m.	Close 6 p.m.	Closed	Open	Closed	Closed	Close 12 noon
Thu	14-Jul	Open	Open	Close 8 a.m.	Open 8 a.m.	Open	Open	Open	Open	Closed	Closed	Closed 6 p.m.	Closed	Closed	Closed
Fri	15-Jul	Open	Open	Open 8 a.m.	Close 8 a.m.	Close 8 a.m.	Close 6 p.m.	Close 6 p.m.	Close 6 p.m.	Open 6 p.m.	Open 6 a.m.	Closed	Closed	Closed	Open 6 p.m.
Sat	16-Jul	Open	Open		Open 2 a.m.	Closed	Closed	Closed	Closed	Open	Open	Closed	Closed	Closed	Open
Sun	17-Jul	Open	Open		Close 2 a.m.	Open 8 p.m.	Open 6 p.m.	Open 6 p.m.	Open 6 p.m.	Close 6 p.m.	Open	Open 6 p.m.	Open 6 p.m.	Open 6 p.m.	Close 12 noon
Mon	18-Jul	Open	Open		Close 2 a.m.	Open	Open	Open	Open	Closed	Open	Open	Open	Open	Open 6 p.m.
Tue	19-Jul	Open	Open			Close 8 a.m.	Close 6 p.m.	Close 6 p.m.	Close 6 p.m.	Open 6 p.m.	Open	Open	Close 6 p.m.	Close 6 p.m.	Open
Wed	20-Jul	Open	Open			Open 8 p.m.	Open 6 p.m.	Open 6 p.m.	Open 6 p.m.	Open	Open	Open	Closed	Closed	Close 12 noon
Thu	21-Jul	Open	Open			Open	Open	Open	Open	Close 6 p.m.	Open	Open	Closed	Closed	Closed
Fri	22-Jul	Open	Open				Close 6 p.m.	Close 6 p.m.	Close 6 p.m.	Open 6 p.m.	Open	Open	Closed	Closed	Open 6 p.m.
Sat	23-Jul	Open	Open				Closed	Closed	Closed	Open	Open	Open	Closed	Closed	Open
Sun	24-Jul	Open	Open				Open 6 p.m.	Open 6 p.m.	Open 6 p.m.	Close 6 p.m.	Open	Open	Open 6 p.m.	Open 6 p.m.	Close 12 noon
Mon	25-Jul	Open	Open				Open	Open	Open	Closed	Open	Open	Close 6 a.m.	Close 6 a.m.	Open 6 p.m.
Tue	26-Jul	Open	Open				Close 6 p.m.	Close 6 p.m.	Close 6 p.m.	Open 6 p.m.	Open	Open	Closed	Closed	Open
Wed	27-Jul	Open	Open				Open 6 a.m.	Open 6 a.m.	Open 6 a.m.	Open	Open	Open	Closed	Closed	Close 12 noon
Tue	28-Jul	Open	Open					Close 6 p.m.	Close 6 p.m.	Open 6 p.m.	Open	Open	Closed	Closed	Closed
Wed	29-Jul	Open	Open					Closed	Closed	Open	Open	Open	Open 6 p.m.	Closed	Open 6 p.m.
Thu	30-Jul	Open	Open					Open 6 p.m.	Open 6 p.m.	Close 6 p.m.	Open	Open	Open	Closed	Open
Fri	31-Jul	Open	Open					Open	Open	Open 6 a.m.	Open	Open	Open	Closed	Close 12 noon
Sat	1-Aug	Open	Open											Open 6 p.m.	Open 6 p.m.

[a] Koyukuk and Innoko subsistence salmon fishing remained open 7 days per week and Old Minto Area remained open 5 days per week with unrestricted mesh size gillnets.

Table 3.–Preliminary summer season commercial harvest summary, Yukon Area, 2011.

District 1

								Chinook Salmon				Summer Chum Salmon		
Period	Starting Time	Start Date	Ending Time	End Date	Hours Fished	Mesh Size	Number of Fishermen	Number Caught but Not Sold	Number Sold	Pounds	Average Weight	Number	Pounds	Average Weight
1	6:00 PM	24 Jun	12:00 midnight	24 Jun	6	R	154	522			-	10,913	73,123	6.7
2	8:00 PM	27 Jun	2:00 AM	28 Jun	6	R	161	643			-	30,189	203,860	6.8
3 [a]	6:00 PM	29 Jun	10:00 PM	29 Jun	4	R	128	147			-	28,237	186,076	6.6
4 [a]	6:00 PM	1 Jul	10:00 PM	1 Jul	4	R	153	222			-	22,540	147,434	6.5
5 [a]	6:00PM	3 Jul	12:00 midnight	3 Jul	6	R	147	132			-	17,184	110,701	6.4
6 [a]	6:00PM	4 Jul	12:00 midnight	4 Jul	6	R	85	72			-	8,539	54,304	6.4
7	8:00 PM	6 Jul	2:00 AM	7 Jul	6	R	133	94			-	11,472	75,479	6.6
8	9:00 PM	8 Jul	6:00 AM	9 Jul	9	R	125	87			-	6,752	43,535	6.4
9	10:00 AM	11 Jul	10:00 PM	11 Jul	12	R	62	18			-	1,364	8,647	6.3
10	6:00 PM	12 Jul	6:00 AM	12 Jul	12	R	96	50			-	10,270	67,488	6.6
11	9:00 AM	14 Jul	9:00 PM	14 Jul	12	R	123	97			-	15,979	106,775	6.7
							Fall Season	35	64	389	6.1			
District 1 Subtotal:					83		228	2,119	64	389	6.1	163,439	1,077,422	6.6

District 2

								Chinook Salmon				Summer Chum Salmon		
Period	Starting Time	Start Date	Ending Time	End Date	Hours Fished	Mesh Size	Number of Fishermen	Number Caught but Not Sold	Number Sold	Pounds	Average Weight	Number	Pounds	Average Weight
1	8:00 PM	26 Jun	12:00 midnight	26 Jun	4	R	137	768			-	15,338	102,252	6.7
2	6:00 PM	28 Jun	10:00 PM	28 Jun	4	R	137	531			-	10,821	70,467	6.5
3 [b]	5:00 PM	6 Jul	8:00 PM	6 Jul	3	R	29	19			-	2,340	14,798	6.3
4 [c]	5:00 PM	7 Jul	9:00 PM	7 Jul	4	R	103	108			-	10,271	66,303	6.5
5	3:00 PM	10 Jul	12:00 midnight	10 Jul	9	R	150	239			-	22,187	139,518	6.3
6	6:00 PM	11 Jul	3:00 AM	12 Jul	9	R	79	98			-	8,716	53,182	6.1
7	6:00 PM	13 Jul	3:00 AM	14 Jul	9	R	103	89			-	6,546	39,657	6.1
8	12:00 noon	15 Jul	9:00 PM	15 Jul	9	R	115	84			-	12,159	77,862	6.4
9	9:00 AM	17 Jul	9:00 PM	17 Jul	12	R	127	63			-	14,693	93,476	6.4
							Fall Season		45	557	12.4			
District 2 Subtotal:					63		183	1,999	45	557	12.4	103,071	657,515	6.4
Lower Yukon Area, Summer Season, Districts 1, 2, and 3 Subtotal: [d,e]					146		403	4,118	109	946	8.7	266,510	1,734,937	6.5

Subdistricts 6-A, 6-B, and 6-C

								Chinook Salmon				Summer Chum Salmon		
Period	Starting Time	Start Date	Ending Time	End Date	Hours Fished 6-A	Hours Fished 6-BC	Number of Fishermen	Number Caught but Not Sold	Number Sold	Pounds	Average Weight	Number	Pounds	Average Weight
1	8:00 PM	18 Jul	8:00 AM	19 Jul	12	12	1	30			-	235	1,410	6.0
2	8:00 PM	19 Jul	8:00 AM	20 Jul	12	12	3	81			-	667	4,002	6.0
3	8:00 PM	22 Jul	8:00 AM	23 Jul	12	12	4	71			-	1,139	6,491	5.7
4	8:00 PM	23 Jul	8:00 AM	24 Jul	12	12	4	69			-	1,224	6,976	5.7
5	8:00 PM	25 Jul	8:00 AM	26 Jul	12	12	3	47			-	1,630	9,290	5.7
6	8:00 PM	26 Jul	8:00 AM	27 Jul	12	12	2	22			-	982	5,597	5.7
7	6:00 PM	29 Jul	12:00 noon	31 Jul	42	42	4	32			-	2,651	14,579	5.5
8	6:00 PM	1 Aug	12:00 noon	3 Aug	42	42	1	0			-	123	677	5.5
9	6:00 PM	5 Aug	12:00 noon	7 Aug	42	42	0	0			-	0	0	-
10	6:00 PM	8 Aug	12:00 noon	10 Aug	42	42	0	0			-	0	0	-
11	6:00 PM	12 Aug	12:00 noon	14 Aug	42	42	0	0			-	0	0	-
District 6 Subtotal:					282	282	5	352			-	8,651	49,022	5.7
Upper Yukon Area, Summer Season, Districts 4, 5, and 6 Subtotal:					282		5	352			-	8,651	49,022	5.7
Yukon Area, Summer Season, Districts 1 Through 6 Total: [d,e]					428		408	4,470	109	946	8.7	275,161	1,783,959	6.5

Note: No commercial fishing occurred in Districts 3, 4, and 5. Mesh size R indicates 6" maximum mesh size.

[a] The area open to commercial fishing was restricted to the South Mouth only.

[b] The area open to commercial fishing was downriver from the confluence of the Andreafsky and the Yukon Rivers to the Y-1 and Y-2 boundary line at the Anuk River.

[c] The area open to commercial fishing was downriver of the slough at the community of Pilot Sation to the Y-1 and Y-2 boundary line at the Anuk River.

[d] The Number of Fishermen is the unique number of permits fished. Some fishermen may fish multiple areas, therefore the subtotals will not necessarily add up by district.

[e] Includes Chinook salmon caught and sold in the fall season.

Table 4.–Chinook salmon commercial harvest and escapement comparisons, Yukon River, 2001–2011.

		Chinook Salmon Commercial Harvest [d]												
District/Subdistrict	Guideline Harvest Range	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Comparison 2011 10-Yr. Average	Recent 10-Year Average (2001-2010)
1			11,087	22,709	28,403	16,694	23,748	18,615	2,530	90	5,744	64	-100%	14,402
2			11,434	14,220	24,145	13,413	19,843	13,302	2,111	226	4,153	45	-100%	11,427
Subtotal 1 & 2	60,000-120,000		22,521	36,929	52,548	30,107	43,591	31,917	4,641	316	9,897	109	-100%	25,830
3	1,800-2,200						315	190						
4A														
4BC				562										
Subtotal 4	2,250-2,850			562										
5ABC	2,400-2,800		564	908	1,546	1,469	1,839	1,241						1,261
5D	300-500		207	226										217
Subtotal 5			771	1,134	1,546	1,469	1,839	1,241						1,333
6	600-800		836	1,813	2,057	453	84	281						921
Total Alaska	67,350-129,150		24,128	40,438	56,151	32,029	45,829	33,629	4,641	316	9,897		-100%	27,298
Canada [b]		9,769	9,069	9,443	10,946	10,977	8,758	4,794	3,399	4,297	2,647		-100%	7,628

		Chinook Salmon Escapement												
Project	Escapement Goal	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Comparison of 2011 to 5-Yr. Average	Recent 5-Year Average (2006-2010)
East Fork Andreafsky River Weir		[n]	4,123	4,336	8,045	2,239	6,463	4,504	4,242	3,004	2,413	5,213 [m]	26%	4,125
East Fork Andreafsky River Aerial [c]	960-1,700 SEG	[j] 1,065 [r]	1,447	1,116 [g]	2,879	1,715	590 [g]	1,758	278 [g]	80 [g]	537			649
West Fork Andreafsky River Aerial [c]	640-1,600 SEG	[i] 570 [r]	917	1,578	1,317	1,492	824	976	262 [g]	1,664	858	1,173	28%	917
Pilot Station Sonar		99,403	123,213	268,537	156,606	159,441	169,403	125,553	130,643 [w]	122,990	113,410	107,274 [m]	-19%	132,400
Anvik River Index Aerial [c]	1,100-1,700 SEG	[j] 1,172 [r]	1,329	973 [g]	3,475	2,421	1,776	1,580	992 [g]	590	721	501	-56%	1,132
Henshaw Creek Weir		[x] 1,103	649	763	1,246	1,059	[o]	569	779	1,157	857	1,796 [m]	114%	841
Nulato River Tower		[o]	2,696	1,716	[p]	[p]	[p]	[p]	[p]	[p]	[p]			
Nulato River Aerial [c]	940-1,900 SEG	[j g] 1,884 [s]	1,584	[g]	1,321	553	1,292	2,583	922	2,251	711	1,401	-10%	1,552
Gisasa River Weir		3,052	2,025	1,901	1,774	3,111	3,030	1,425	1,735	1,955	1,516	2,692 [m]	39%	1,932
Gisasa River Aerial [c]	420-1,100 SEG	[j g] 1,298 [r]	506	[g]	731	958	843	593	487	515	264		-100%	540
Chena River Tower/MR Tagging	2,800-5,700 BEG	[k f] 9,696 [f]	6,967 [f]	8,739 [f]	9,645	[o]	2,936	3,806	3,208	5,250	2,382	195 [m,t]	-94%	3,516
Salcha River Tower/MR Tagging	3,300-6,500 BEG	[k] 13,328	4,644 [f]	15,500 [f]	15,761	5,988	10,679	6,425 [t]	2,731 [t]	12,786	6,135	[m]	-100%	7,751
Eagle Sonar						81,528	73,691	41,697	38,097	69,957	35,074	50,780 [m]	-2%	51,703
Canadian Estimated Escapement	IMEG 42,500-55,000	[u] 52,564	42,359	80,594	48,469	68,551	62,933	34,903	33,630	65,278	31,818	49,780 [m]	9%	45,712
ESCAPEMENT INDEX [h]		78,640	62,814	112,786	83,694	79,889	86,041	51,063	45,546	88,273	44,264	57,880	-8%	63,037

-continued-

Table 4.–Page 2 of 2.

[a] Commercial harvest includes the estimated harvest of females to produce roe sold.

[b] Total harvest for all fisheries in Canadian mainstem Yukon River.

[c] Aerial surveys rated good to fair unless noted otherwise.

[f] Mark and recapture tagging estimate; tower counts were minimum/incomplete due to late installation and/or early removal of project, or high water events/weather conditions.

[g] Aerial surveys rated as incomplete and/or poor survey conditions; data not comparable to other years.

[h] The escapement index is the summed escapements for East Fork Andreafsky weir, Nulato tower, Gisasa weir, Chena and Salcha towers, and Canada mainstem border passage minus the Canadian catch.

[j] SEG = "Sustainable escapement goal", as defined by the Sustainable Fisheries Policy

[k] BEG = "Biological escapement goal", as defined by the Sustainable Fisheries Policy. Range established in 2001.

[m] Data are preliminary.

[n] Weir counts incomplete due to late start-up. On average, missed approximately 75% of Chinook passage. Total counts for 2001 were 1,148 Chinook salmon.

[o] No data due to incomplete operations.

[p] Did not operate.

[r] In 2001, the escapement goals were revised.

[s] In 2001, the Nulato River escapement goal was established for both forks combined.

[t] Tower counts were minimum due to high water events/weather conditions.

[u] In 2008, the escapement goal was revised to an Interim Mananagement Escapment Goal (IMEG) and continued in 2009. In 2010 the escapement goal was revised again.

[w] Due to the large run of pink salmon observed in 2008, species apportionment issues were encountered. After more thorough analysis, sonar estimates have been adjusted post season.

[x] Project counts not comparable to other years; incomplete counts due to late start.

[y] Inseason run assessment was hampered by high water that affected Pilot Station sonar.

Table 5.–Summer chum salmon commercial harvest and escapement comparisions, Yukon River, 2001–2011.

Summer Chum Salmon Commercial Harvest [a]

District/Subdistrict		Guideline Harvest Range	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Comparison of 2011 to 10-Yr. Average	Recent 10-Year Average (2001-2010)
1				6,327	3,579	13,993	23,965	21,816	106,790	67,459	75,346	102,267	163,439	249%	46,838
2				4,027	2,583	5,782	8,313	25,543	69,432	58,139	86,571	80,948	103,071	172%	37,926
Subtotal 1 & 2		251,000-755,000		10,354	6,162	19,775	32,278	47,359	176,222	125,598	161,917	183,215	266,510	214%	84,764
3		6,000-19,000						116	1						
Anvik River	Est. Fish														
	lbs. Roe [p]	100,000													
4A	Est. Fish	113,000-338,000							7,304	24,346	4,589	44,207			20,112
	lbs. Roe	61,000-183,000							5,938	21,575	3,906				10,473
4BC	Est. Fish	16,000-47,000			62										62
	lbs. Roe														
Subtotal 4					62										62
5ABC				6		25		20							17
5D															
Subtotal 5		1,000-3,000		6		25		20							17
6	Est. Fish	13,000-38,000		3,217	4,461	6,610	8,986	44,621	14,674	1,842	7,777	5,466	8,651	-20%	10,850
	lbs. Roe														
Total		400,000-1,200,000		13,577	10,685	26,410	41,264	92,116	198,201	151,786	174,283	232,888	275,161	163%	104,579

Summer Chum Salmon Escapement

Project	Escapement Goal	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Comparison 2011 5-Yr. Average	Recent 5-Year Average (2006-2010)
East Fork Andreafsky River Weir	65,000-135,000 BEG	[n]	45,019	22,603	62,730	20,127	101,465	69,642	57,259	8,770	72,893 [m]	100,473	62%	62,006
Pilot Station Sonar		441,450	1,088,463	1,168,518	1,357,826	2,439,616	3,767,044	1,726,885	1,665,667 [g]	1,285,437	1,327,581 [m]	1,779,459	-9%	1,954,523
Anvik River Sonar	350,000-700,000 BEG	224,058	462,101	251,358	365,691	525,391	992,378 [k]	459,038	374,929 [g]	193,099	396,173 [m]	642,527	33%	483,123
Henshaw Creek Weir		35,031	25,249	22,556	85,966	237,481	[c]	31,442	97,281	156,201	100,670 [m]	248,247	158%	96,399
Nulato River Tower		[c]	72,230	17,814	[r]	[r]	[r]	[r]	[r]	[r]	[r]	[r]		
Gisasa River Weir		17,936	32,943	24,379	37,851	172,259	225,225	46,257	36,758	25,833	47,667 [m]	95,796	25%	76,348
Clear Creek Tower		3,674	13,150	5,230	15,661	26,420	29,166 [u]	[r]	[r]	[r]	[r]			29,166
Chena River Tower	[c]	4,773 [c]	1,021 [c]	573 [c]	15,162	16,875 [c]	35,109	4,705 [c]	1,333 [c]	16,516	7,580 [m]	333 [c]	-97%	13,049
Salcha River Tower		14,900	20,837 [c]	890 [c]	47,861	193,085	111,869	11,196 [c]	1,251 [c]	30,490	23,863 [m]	31,002	-13%	35,734
ESCAPEMENT INDEX [g]		296,698	659,400	340,173	615,261	1,165,218	1,466,046	622,280	568,811	430,909	648,846		-100%	747,378

-continued-

Table 5.–Page 2 of 2.

[a] Commercial harvest includes the estimated harvest of females to produce roe sold, except for Districts 3 and 4, which also includes the estimated number of males harvested to produce roe sold.

[c] Project counts not comparable to other years; incomplete counts due to early removal of project or high water events/weather conditions.

[g] The escapement index is the summed escapements for East Fork Andreafsky weir, Anvik sonar, Gisasa weir, Kaltag, Nulato, and Salcha towers.

[k] BEG = "Biological escapement goal", as defined by the Sustainable Fisheries Policy. Range established in 2001.

[m] Data are preliminary.

[n] Weir counts incomplete due to late start-up. On average, missed approximately 75% of Chinook passage. Total counts for 2001 were 2,086 summer chum salmon.

[p] Escapement goal revised in 2001.

[r] Did not operate.

[s] Due to the large run of pink salmon observed in 2008, species apportionment issues were encountered. After more thorough analysis, sonar estimates have been adjusted post season.

[t] HTI and DIDSON sonar equipment used in 2006. Estimates reported are DIDSON derived.

[u] Videography count.

Table 6.–Number of commercial salmon fishing gear permit holders who delivered fish, listed by district and season, Yukon Area, 1971–2011.

	Chinook and Summer Chum Salmon Season								
	Lower Yukon Area				Upper Yukon Area				
Year	District 1	District 2	District 3	Subtotal [a]	District 4	District 5	District 6	Subtotal	Total
1971	405	154	33	592	-	-	-	-	592
1972	426	153	35	614	-	-	-	-	614
1973	438	167	38	643	-	-	-	-	643
1974	396	154	42	592	27	31	20	78	670
1975	441	149	37	627	93	52	36	181	808
1976	453	189	42	684	80	46	29	155	839
1977	392	188	46	626	87	41	18	146	772
1978	429	204	22	655	80	45	35	160	815
1979	425	210	22	657	87	34	30	151	808
1980	407	229	21	657	79	35	33	147	804
1981	448	225	23	696	80	43	26	149	845
1982	450	225	21	696	74	44	20	138	834
1983	455	225	20	700	77	34	25	136	836
1984	444	217	20	613	54	31	27	112	725
1985	425	223	18	666	74	32	27	133	799
1986	441	239	7	672	75	21	27	123	795
1987	440	239	13	659	87	30	24	141	800
1988	456	250	22	678	95	28	33	156	834
1989	445	243	16	687	98	32	29	159	846
1990	453	242	15	679	92	27	23	142	821
1991	489	253	27	678	85	32	22	139	817
1992	438	263	19	679	90	28	19	137	816
1993	448	238	6	682	75	30	18	123	805
1994	414	250	7	659	55	28	20	103	762
1995	439	233	0	661	87	28	21	136	797
1996	448	189	9	627	87	23	15	125	752
1997	457	188	0	639	39	29	15	83	722
1998	434	231	0	643	0	18	10	28	671
1999	412	217	5	631	5	26	6	37	668
2000	350	214	-	562	-	-	-	-	562
2001 [b]	-	-	-	-	-	-	-	-	-
2002	323	223	[c]	540	[c]	14	6	20	560
2003	352	217	[c]	556	3	16	7	26	582
2004	396	213	[c]	550	[c]	14	6	20	570
2005	370	228	[c]	578	[c]	12	5	17	595
2006	379	214	6	569	[c]	15	10	25	594
2007	359	220	3	564	5	12	10	27	591
2008	266	181	[c]	444	8	[c]	5	13	457
2009	213	166	[c]	376	6	[c]	5	11	387
2010	264	181	[c]	440	5	[c]	5	10	450
2011	230	183	[c]	403	[c]	[c]	5	5	408
2001-2010 Avg.	325	205	5	513	5	14	6	17	532
2011 vs. Avg.	-29.2%	-10.6%		-21.4%			-21.9%	-71.3%	-23.3%

[a] Since 1984 the subtotal for the Lower Yukon Area was the unique number of permits fished. Prior to 1984, the subtotals are additive for District 1, 2, and 3. Some individual fishermen in the Lower Yukon Area may have operated in more than one district during the season.

[b] No commercial fishing occurred in 2001.

[c] No commercial fishing periods in portions or all of Districts 3, 4, and 5.

Table 7.–Value of commercial salmon fishery to Yukon Area fishermen, 1977–2011.

	Chinook					Summer Chum						Value by Species		Value by Area		
	Lower Yukon		Upper Yukon			Lower Yukon			Upper Yukon							
Year	$/lb	Value	$/lb	$/Roe	Value	$/lb	$/Roe	Value	$/lb	$/Roe	Value	Chinook	Summer Chum	Lower	Upper	Total
1977	0.85	1,841,033	1.37		148,766	0.40		1,007,280	0.27	2.66	306,481	1,989,799	1,313,761	2,848,313	455,247	3,303,560
1978	0.90	2,048,674	0.87		66,472	0.45		2,071,434	0.24	N/A	655,738	2,115,146	2,727,172	4,120,108	722,210	4,842,318
1979	1.09	2,763,433	1.00		124,230	0.52		2,242,564	0.25	3.00	444,924	2,887,663	2,687,488	5,005,997	569,154	5,575,151
1980	1.04	3,409,105	0.85		113,662	0.20		1,027,738	0.23	2.50	627,249	3,522,767	1,654,987	4,436,843	740,911	5,177,754
1981	1.20	4,420,669	1.00		206,380	0.40		2,741,178	0.20	3.00	699,876	4,627,049	3,441,054	7,161,847	906,256	8,068,103
1982	1.41	3,768,107	1.02		162,699	0.40		1,237,735	0.18	2.75	452,837	3,930,806	1,690,572	5,005,842	615,536	5,621,378
1983	1.40	4,093,562	1.08		105,584	0.34		1,734,270	0.16	1.66	281,883	4,199,146	2,016,153	5,827,832	387,467	6,215,299
1984	1.50	3,510,923	0.95		102,354	0.26		926,922	0.23	1.78	382,776	3,613,277	1,309,698	4,437,845	485,130	4,922,975
1985	1.50	4,294,432	0.86		82,644	0.35		1,032,700	0.23	1.94	593,801	4,377,076	1,626,501	5,327,132	676,445	6,003,577
1986	1.63	3,165,078	0.89		73,363	0.38		1,746,455	0.22	2.08	634,091	3,238,441	2,380,546	4,911,533	707,454	5,618,987
1987	1.98	5,428,933	0.79		136,196	0.48		1,313,618	0.19	2.22	323,611	5,565,129	1,637,229	6,742,551	459,807	7,202,358
1988	2.97	5,463,800	1.04		142,284	0.66		5,001,100	0.23	4.33	1,213,991	5,606,084	6,215,091	10,464,900	1,356,275	11,821,175
1989	2.77	5,181,700	0.84		108,178	0.34		2,217,700	0.24	4.41	1,377,117	5,289,878	3,594,817	7,399,400	1,485,295	8,884,695
1990	2.84	4,820,859	0.72		105,295	0.24		497,571	0.11	4.41	506,611	4,926,154	1,004,182	5,318,430	611,906	5,930,336
1991	3.70	7,128,300	0.70	2.92	97,140	0.36		782,300	0.18	4.21	627,177	7,225,440	1,409,477	7,910,600	724,317	8,634,917
1992	4.12	9,957,002	0.91	2.82	168,999	0.27		606,976	0.30	4.53	525,204	10,126,001	1,132,180	10,563,978	694,203	11,258,181
1993	2.70	4,884,044	1.06	5.52	113,217	0.37		226,772	0.35	8.53	203,762	4,997,261	430,534	5,110,815	316,979	5,427,794
1994	2.07	4,169,270	0.92	3.11	124,270	0.21		79,206	0.20	3.77	396,685	4,293,540	475,891	4,248,476	520,955	4,769,431
1995	2.09	5,317,508	0.77	2.64	87,059	0.16		241,598	0.13	3.57	1,060,322	5,404,567	1,301,920	5,559,106	1,147,381	6,706,487
1996	1.95	3,491,582	0.95	2.57	47,282	0.09	2.96	89,020	0.07	3.05	966,277	3,538,864	1,055,297	3,580,602	1,013,559	4,594,161
1997	2.46	5,450,433	0.97	1.62	110,713	0.10		56,535	0.07	1.08	96,806	5,561,146	153,341	5,506,968	207,519	5,714,487
1998	2.51	1,911,370	0.91	2.00	17,285	0.14		26,415	0.18	1.90	821	1,928,655	27,236	1,937,785	18,106	1,955,891
1999	3.80	4,950,522	1.10	2.11	74,475	0.10		19,687	0.18	2.25	1,719	5,024,997	21,406	4,970,209	76,194	5,046,403
2000	4.57	725,606				0.17		8,633				725,606	8,633	734,239		734,239
2001																
2002	3.77	1,691,105	0.75	1.75	20,744	0.06		4,342	0.32	2.25	6,176	1,711,849	10,518	1,695,447	26,920	1,722,367
2003	2.37	1,871,202	0.80		40,957	0.05		1,585	0.27		6,879	1,912,159	8,464	1,872,787	47,836	1,920,623
2004	2.80	3,063,667	0.77		38,290	0.05		8,884	0.27		9,645	3,101,957	18,529	3,072,551	47,935	3,120,486
2005	3.43	1,952,109	0.87		24,415	0.05		11,004	0.25		13,479	1,976,524	24,483	1,963,113	37,894	2,001,007
2006	3.94	3,290,367	1.30		32,631	0.05		23,862	0.16		42,988	3,322,998	66,850	3,314,229	75,619	3,389,848
2007	3.73	1,939,114	1.33		27,190	0.19		220,715	0.25	2.36	34,421	1,966,304	255,136	2,159,829	61,611	2,221,440
2008	4.64	325,470				0.40		326,930	0.25	3.00	65,840	325,470	392,770	656,606 [a]	65,840	718,240
2009	5.00	20,970				0.50		514,856	0.26	3.00	20,430	20,970	535,286	535,826	20,430	556,256
2010	5.00	639,230				0.70		823,967	0.23		61,534	639,230	885,501	1,463,197	61,534	1,524,731
2011	-	-	-	-	-	0.75		1,301,403	0.26		12,966	-	1,314,369	1,301,403	12,966	1,314,369
2001-2010 Avg.	3.85	1,643,692.67	0.97	1.75	30,705	0.23		215,127	0.25	2.65	29,044	1,664,162	244,171	1,859,287	49,513	1,908,333
2011 vs. Avg.						229.3%		504.9%	3.3%				438.3%	-30.0%	-73.8%	-31.1%

[a] Includes $4,656 in sales of pink salmon in Districts 1 and 2.

WRITTEN TESTIMONY
BY ART C. IVANOFF,
CHAIR SOUTHERN NORTON SOUND FISH AND GAME
ADVISORY COMMITTEE

FOR THE

ALASKA HOUSE OF REPRESENTATIVES
SPECIAL COMMITTEE ON FISHERIES

My name is Art C. Ivanoff. I am the chair of Southern Norton Sound Fish and Game Advisoty Committee (SNSAC). SNSAC represents the villages of Koyuk, Shaktoolik, Stebbins, Saint Michael, and Unalakleet.

Due to budget constraints, I was unable to attend the House of Representative's Special Committee on Fisheries, however, SNSAC needed to share with you concerns regarding; 1. The need to review and assess the Fish and Game Advisory Committee process and budget (AC) 2. Inadequate funding of the DF&G. 3. 2013 MSA.

1. SNSAC believes a healthy and productive process of assessing the overall function and operation of the AC's is necessary. Since inception of the AC's, has there been a process to evaluate the AC's? SNSAC believes there is a need to examine the process, to determine what works and what does not work to improve the overall performance of the AC's. This can be accomplished by the Alaska Legislature developing legislation that would require decadal review of the AC's and funding to bring members of the AC's to evaluate the role and effectiveness of the AC's.

2. SNSAC believes that the Alaska Department of Fish and Game in Norton Sound is underfunded and understaffed to address the constitutional and statutory obligation to ***manage*** salmon stocks. SNSAC bases this observation on Table 1. Table reveals that NSEDC spends a significant amount of resources the management of salmon in the Norton Sound. SNSAC believes the DF&G is too dependent on NSEDC financial resources for "basic" management tools to manage the salmon stocks. We ask that the governor and the Alaska State Legislature provide **full funding** to the DF&G to ensure they have the capacity and resources to carry out their constitutional and statutory obligations.

3. Recently, a letter (see attached) was submitted by former members of the North Pacific Fisheries Management Council, crabbers and fishermen entitled and to; <u>An appeal Washington and Oregon Congressional Delegation, Governor's and State Legislators regarding, the Level of Fisheries Playing Field in Alaska</u>, a fifteen (15) page paper outlining concerns with Alaska gaining ground and developing their capacity to keep vessels and jobs in Alaska. The letter also called for increased representation on the North Pacific Fisheries Management Council for Washington and Oregon. Alaska is unique in many ways and one real distinction between Alaska and the continental United States as it relates to fisheries management is that there is no sea ward states, Alaska

stands alone with no bordering states. Our fisheries, except for some mixed stock of salmon in the Gulf of Alaska, are Alaskan. An effort is underway to gain greater control of fisheries of Alaska. The Magnuson-Stevens Conservation and Management Act will come up for re-authorization in 2013; however, the battle over management has begun.

SNSAC hope is that the state legislature, governor, NGO's and Alaska's federally recognized tribes will work across the board to seek amendments to the Magnuson-Stevens Fishery Conservation and Management Act that will ensure; Healthy ecosystems, economic opportunities and jobs. Without a full court press from the collective body of Alaska, I am afraid Alaska will remain a colony of Washington and Oregon. Local concerns of salmon stocks and marine resources that are harvested in the Bering Sea Aleutian Islands must not be sacrificed for national interests, a balance or equilibrium is necessary to ensure salmon stocks in the Arctic-Yukon-Kuskokwim are sustained.

Thank you for the opportunity.

Table 1.
Projects funded by
Norton Sound Economic Development Corporation

North Tower	$ 95,000	
Shaktoolik Sonar	$134,000	
Inglutalik Tower	$100,000	
Eldorado River	$ 21,000	
Snake River	$ 21,000	
Pilgrim Weir	$ 49,000	
Additional interns	$ 65,000	Equals about one project for the year
Over site staff	$105,000	
Pikmiktalik*	$95,000	
Total	**$685,000**	

*Pikmiktalik, near Saint Michael, is added to ensure DF&G manages salmon stocks based effectively.

Appeal to the Washington and Oregon Congressional Delegations,

Governors and State Legislators:

Level the Fisheries Playing Field with Alaska

Summary

The fishing industry in Washington and Oregon has arrived at a fateful crossroads. Unless its elected Members of Congress secure reform of the North Pacific Fishery Management Council, to counteract the automatic voting majority for Alaska, and unless they and the Washington and Oregon Governors and State Legislatures provide financial incentives and other support programs approximating those provided by the State of Alaska, major sectors of the industry will leave its traditional homeports in the south, forever. In the absence of decisive action, thousands of jobs will be lost in Washington and Oregon, as assets and new investments continue to flow to Alaska.

While Washington and Oregon have stood idly by, Alaskan politicians, at the State, local, and national levels have been enormously effective. Alaskans will fight hard to preserve and extend their gains. Elected representatives of

Washington and Oregon will have to show real political courage and determination, in confronting this challenge.

The Nature and Scope of the Problem

Accordingly to a report in 2011 by Dr. Hans Radtke, a prominent economist and former Chairman of the Pacific Fishery management Council, local and distant water fisheries fleets based at the Port of Seattle's Fishermen's Terminal, Maritime Industrial Center, and Pier 91 account for $814 million in annual local spending and 14,972 jobs, and a total multiplier economic contribution of $3.48 billion, all of which are at risk of being lost. Washington and Oregon already are suffering from dramatic economic losses from exiting by heavy industries.

When Washington's Senator Warren Magnuson led the way to enactment of the Magnuson-Stevens Fishery Conservation and Management Act, his objective was to ensure conservation of the federal fishery resources within the 200-mile zone, for the benefit of the American fishing industry, coastal communities, and the national economy. When he agreed to the Alaskan majority on the North Pacific Council, he certainly did not anticipate a strategic campaign to deprive his State of the very industry he sought to promote. Discrimination against Washington and Oregon on the federal Council would have seemed impossible under the United States Constitution

and the mandatory National Standards of management in the Act. Indeed, all the coastal states including Alaska agreed to a national standard on non-discrimination of fishermen from different states. This has been ignored by the North Pacific Fishery Management Council.

The last foreign fleets departed the U.S. 200-mile zone, in 1988. During the following two decades, Alaskans on the Council, with the strong support of their representatives in Congress, their Governor and State Legislature, and the Board of Fisheries and the Alaska Department of Fish and Game, methodically employed the federal fishery management system to effect massive transfers of wealth from Washington and Oregon. This was accomplished through onerous conditions and restrictions imposed on vessels home ported in Washington and Oregon, and through unique fishing-related privileges bestowed upon Alaskan communities, and was supplemented by generous State support programs. These actions have intensified in the most recent several years.

Fishermen's News, the most widely circulated fishing trade publication on the West Coast, reported the following, in May 2011:

> The largest seafood company based in Alaska is planning to shift the homeport for its 24-vessel fleet from Seattle to the City of Seward on the Kenai Peninsula. Permanent relocation of the Coastal Villages Region Fund fleet, which now spends upward of $25 million annually for mooring and maintenance in Seattle, could begin moving as soon

as 2014, city and CVRF officials told the House Community & Regional Affairs Committee, March 31 (Juneau). Seward is asking the legislature for $500,000 to pay for preconstruction work for port and support infrastructure expansion needed to accommodate the move. The Alaska House was preparing to adopt a resolution supporting the funding request.

CVRF is one of six community development quota (CDQ) organizations created by the North Pacific Fishery Management Council in 1992 to promote economic development in Bering Sea coastal communities. Each of the CDQ groups received a share of the annual quota of pollock and later other Groundfish and crab stocks. The groups at first leased their quotas to Seattle fishing companies but have been using their growing revenues to buy and build ships, processing companies and for other seafood industry investments. The six groups invested more that $118 million in various projects in 2009.

'It is inevitable that our recently acquired fleet will gravitate north to its owner for the same reason that many of the vessels still go south to their Seattle owners and for the same reason that, before the Americanization of our fisheries,' wrote John Marks, CVRF president, in Feb. 7 letter to Seward Mayor Willard Dunham.

'It is conceivable that the move of CVRF to Alaska would encourage the other five CDQ groups to relocate their home ports to Alaska as well,' Marks added in his letter. If the other groups follow CVRF's lead, more than 200 blue water vessels could relocate from Seattle and other Pacific Northwest ports to Alaska.

CVRF may be the most successful CDQ group. A report on 2009 operations released last month by the CDQ association showed $12.79 million in wages and fisheries payments and projected seafood sales of $100 million in 2012.

The Magnuson-Stevens Fishery Conservation and Management Act ("MSA") provides for 11 Council members on the North Pacific Fishery Management Council ("Council"). There are six Alaskan at-large seats, including the Director of Fisheries from Alaska, plus the Regional Director of the National

Marine Fisheries Service ("NMFS"), who is based in Juneau. There are three voting representatives from Washington and one from Oregon. In the early years, this unbalanced voting structure presented no risk of Alaska using its power to win industry away from Washington and Oregon, because removing the foreign fleets was a common goal for all three States. However, as the foreigners were phased out, and as most fish stocks were restored to sustainable levels, it became clear that further, major growth in the Alaskan fishing could only be achieved by moving industry from the South to the North. Sometimes won over by Alaska's pleas for help in improving economic conditions in remote coastal villages, other times compelled by Alaska's political giants, Washington and Oregon agreed to many of the federal statutory and regulatory machinations that would prove so costly to the South.

Community Development Quotas ("CDQs") were established by the Council in 1992, to stimulate fishery opportunities in certain Alaskan coastal areas, and were subsequently enshrined and extended in the MSA. This seemed, at the times that the Council and the Congress acted, to do no more than address disadvantages that impeded greater enjoyment of federal fisheries resources by Alaskans, particularly in rural communities that were economically and socially hard-pressed. After all, so the argument went, the economic benefits of individual fishing quotas ("IFQs") and fishing

cooperatives were overwhelmingly enjoyed by the industry in Washington and Oregon. At the outset, and for some time, thereafter, this was true. However, as the Alaskans exercised their power in Congress and on the Council, with the aggressive support of the State Government, the economic benefits of federal fisheries flowed away from the South, to the North.

In 1992, the Council set up a quota share program for halibut and sablefish, with harvest rights valued, then and now, at approximately $1.5 billion. In 1998, Congress established pollock cooperatives, the functional equivalent of quotas, valued at about $6 billion. CDQs were applied, and remain, at 10 percent in those several fisheries. The Council established programs for cod and flounder in the Bering Sea valued at $1.4 billion in fishing rights, again subject to ten percent CDQs. Congress and the Council developed individual fishing and processing quotas for King crab and tanner crab, valued at $1.4 billion. There, again, ten percent of the resources were committed to selected Alaskan communities. As had formerly been the case, all crab landings had to be made in Alaska.

The family history that pioneered the federal fishery resources in Bering Sea was over 90% from Washington and Oregon. The cost to them of receiving individual quotas and coops was a perpetual 10% allocation of all Bering Sea species to coastal Alaska. CDQs for communities outside Alaska were not

allowed, and these quotas were a minimum reserve, not a cap on what Alaska community groups could acquire later. The Council and Congress set up CDQs with the intent that the residents would be able to learn the operation of fishing vessels. However, instead, CDQs have evolved into quota share holding companies that lease back fishing opportunities, with little direct fishing involvement by communities and large management fees for a select few individuals based in Alaska.

CDQs were set up as tax-exempt corporations, and the effect of this status was, over time, to allow the CDQs to establish huge financial war chests for expansion of control over vast federal fisheries resources. Of course, tax exempt status was not enjoyed by other participants in the fisheries, resulting in a tremendous competitive disadvantage.

Due to conservation-based limits on fishing, the allocation of economic benefits became essentially a zero-sum game. What the North won, the South lost.

CDQs now own and control 40-45% of the pollock factory trawl fleet moored in Seattle, much of the Pacific cod freezer longline fleet, and increasing amounts of Bering Sea crab quotas. A CDQ group has acquired 50% of Ocean Beauty Seafoods, a company representing $500,000,000 in annual

sales, with concomitant economic benefits flowing to Alaskans. With the advantage of their tax-exempt status, CDQ organizations have become predatory in acquiring fishing opportunities and segments of the industry.

The CDQ groups have also exploited the structural features of fisheries management. For example, fifteen percent of the sablefish program is set up as at-sea processor quota, called "A" shares. These can be used by all vessel size categories and are available to all investors. The CDQs have used their tax-exempt status to push prices of "A" share sablefish beyond the reach of tax-paying fishing families. Fishing families must pay both sides of Social Security taxes, withholding taxes, Alaskan state landing fees (called Bureau Taxes) of 3%, and the federal 3% IFQ use fee. Originally, by design aimed at preserving the historical character of the fishery, eighty-five percent of the fishing privileges in the Bering Sea went to fishing families in Washington. The tax-exempt CDQ corporations are picking off those fishing rights and the employment that goes with them. At risk, according to Paul Sommers, Ph.D., Seattle University, is more than $1.1 billion.

Predatory purchasing of Bering Sea crab has also taken place. The Council set a 1% ownership cap on the American crab fishing families. By contrast, each CDQ community can purchase up to 5% of the crab quota. When crab

quotas were established, 80% were earned by non-Alaskan fishing families, mostly from Washington and Oregon. American fishing families, mostly non-Alaskans, developed the federal crab fishery, pushing the foreign fleets out, but have been subordinated to the tax exempt CDQ groups designed by Alaska to shift the ownership to the North.

Recently, the Council voted to take steps so that the private holders of crab quota would readjust their quota lease fees, so crews would get more of the revenues. A similar approach to CDQs was not made, yet they charge as much as 70% lease fees to catch their red king crab harvest quotas. This will leave CDQ groups with a larger profit margin than that of the private family holders, most of whom are in the South, further enabling a shift of economic benefits to the North. The current advantage of CDQ groups is shifting 30% to 40% of privately owned crab quota to the Alaskan CDQ holding companies, which lease it back and charge excessive rates, harming both vessel owners and crews.

Another economic advantage given to Alaskan crab CDQs is that they are exempt from paying back the Bering Sea crab vessel "buyback" loan made by the Federal Government. This federal loan of $100,000,000 to the Bering Sea crab fleet helped buy down the fleet size, so all participants that remained benefited. The CDQs benefited proportionately to everyone else,

but do not have to pay back any of the loan. American fishing families, mostly non-Alaskans, are left with the burden of repayment, while Alaskan CDQ groups, not so burdened benefit from increased competitiveness.

In order to provide an additional advantage to Alaskan communities in the Gulf of Alaska, under the Halibut/Sablefish IFQ Program, the Council established Community Quota Entities (CQEs), which are non-profit organizations incorporated under the laws of the State, or tribal regulations in the case of one of the communities, to represent eligible communities. These tax exempt organizations acquire and lease quota to fishery participants, gaining economic benefits for Alaska. Initially there were forty-two CQEs, but there are now 45. Non-Alaskan CQEs are not permitted. In order to participate as a fisherman in an Alaskan CQE, a person must: (1) Be a citizen of the United States; (2) Maintain a domicile in a rural community listed in Table 21 (all of which are Alaskan communities) to this part for the 12 consecutive months immediately preceding the time when the assertion of residence is made, and who is not claiming residency in another community, state, territory, or country, except that residents of the Village of Seldovia shall be considered to be eligible community residents of the City of Seldovia for the purposes of eligibility to lease IFQ from a CQE; and (3) Is an IFQ crew member. [*Federal Register*.]

The Council voted to allow Alaskan tax exempt CQEs to purchase up to 20% of all the halibut and sablefish quota shares in the Gulf of Alaska and lease it back to fishing families. The Council also voted to restrict initial recipients of halibut/sablefish quota shares from buying any more, unless the quota is put in an individual's name and that person fishes on the vessel. Many original quota share recipients were family-operated partnerships and/or corporations. CQEs are not similarly restricted. This change has been made ostensibly to provide more purchasing opportunities for the crews and new entrant fishermen. The theory offered is that, if the original quota share recipients are removed from the marketplace, they will not out-compete crews. The reality is the crews will not be able to outbid tax-exempt CQE corporations, which the Alaska State Legislature is planning to strengthen, by providing $1,000,000 in interest-free loans for the purchase of halibut/sablefish quota shares. This change is intended to divert quota into Alaskan CQEs, which are designed to provide exclusively Alaskans fishing access of federal resources, while denying original fishing families the ability to bid for quota shares.

In addition, when the halibut charter limited entry program was developed, the Council granted each of the 21 CQEs in Southeast Alaska four charter licensing endorsements for six angler endorsements. Similarly, the 21 western Gulf of Alaska CQEs were awarded 7 permits each, each with 6

angler endorsements. The CQEs did not have to meet any performance conditions that charter boat fishing families had to meet. These permits are effectively subsidized by the working fishing families.

In short, CQEs and CDQs are becoming for-profit quota and fishing rights lease holding companies. There is very little that resembles a not-for-profit operation. Notably, public documents indicate their CEOs are paid $500,000 to $800,000 (Council reports). It is all about charging maximum use fees off the backs of fishing families and guaranteeing Alaskans fishing opportunities otherwise enjoyed by non-Alaskans. Alaskan politicians do not mind their own fishing families being out-bid by CQEs or CDQs, as long as the quota migrates to Alaska. Washington and Oregon elected officials need to recognize that the income opportunities for non-Alaskans are being marginalized.

According to Deckboss.com, Alaska Senators Murkowski and Begich have proposed federal legislation that would make business purchases by the CDQs exempt from federal taxes. If CDQs were to buy a for-profit company, the profits of the new acquisition would be tax-exempt, as well. No family or for-profit corporation in Alaska or outside Alaska could compete in such an environment. The Joint Committee on Taxation estimates the Federal Government would lose $92 million-$124 million, through 2019, if such a bill

were enacted. The advantage won by Alaska would be at the cost of increasing the negative side of the federal budgetary ledger, at a time when the federal deficit and the national debt must, as a top priority, be dramatically reduced.

The pattern is clear. The CDQ groups are winning economic benefits that non-Alaskan fishing participants do not enjoy, while at the same time, those groups are spared economic costs imposed on non-Alaskans.

National Standard 4 of the MSA, states, "Conservation and management measures shall not discriminate between residents of different states." It is impossible to reconcile the intent of this provision with actions of the Council that impose economic burdens on fishermen from the South, while providing advantages to communities in the North. The National Marine Fisheries Service, which no doubt has to worry about the powerful Alaska Congressional Delegation, when it comes to annual budgets and program authorizations, has been completely absent with regard to protecting the rights of fishing families from Washington and Oregon. The Obama Administration be encouraged by the Washington and Oregon Congressional Delegations and Governors to take decisive steps to address this situation.

The Solution

Amend the MSA to Reform the Council

- Add two at-large votes for Washington and an additional vote for Oregon, thereby providing those States equal voting with Alaska.
- Alternatively, when developing an amendment for quota shares or other limited entry programs, require a super majority vote of 8 out of 11, and require all three state fisheries directors to vote affirmatively.

Mobilize Financial Incentives in Washington and Oregon

- In Washington, where a new Governor and a Senator will be up for reelection, in 2012, elevate the discriminatory and damaging treatment of the State's fishing industry to the status of a major political issue.
- Establish Governors' task forces and conduct public hearings in the Washington and Oregon Legislatures, as the basis for legislation aimed at stopping the flow North of fishing jobs and investments and preventing the further the loss of fisheries-related infrastructure.
- Based on the findings of the task forces and legislative hearings, establish incentives for Washington and Oregon fishing families and companies to remain in those States.
- Expand tax-exempt CDQs and CQE opportunities to Washington and Oregon. Limit the time CQEs and CDQs may operate as tax-exempt corporations.

Support Industry-Initiated Litigation

- The Governors of Washington and Oregon should provide support for litigation undertaken by their industry residents to defeat discriminatory and damaging Council actions.

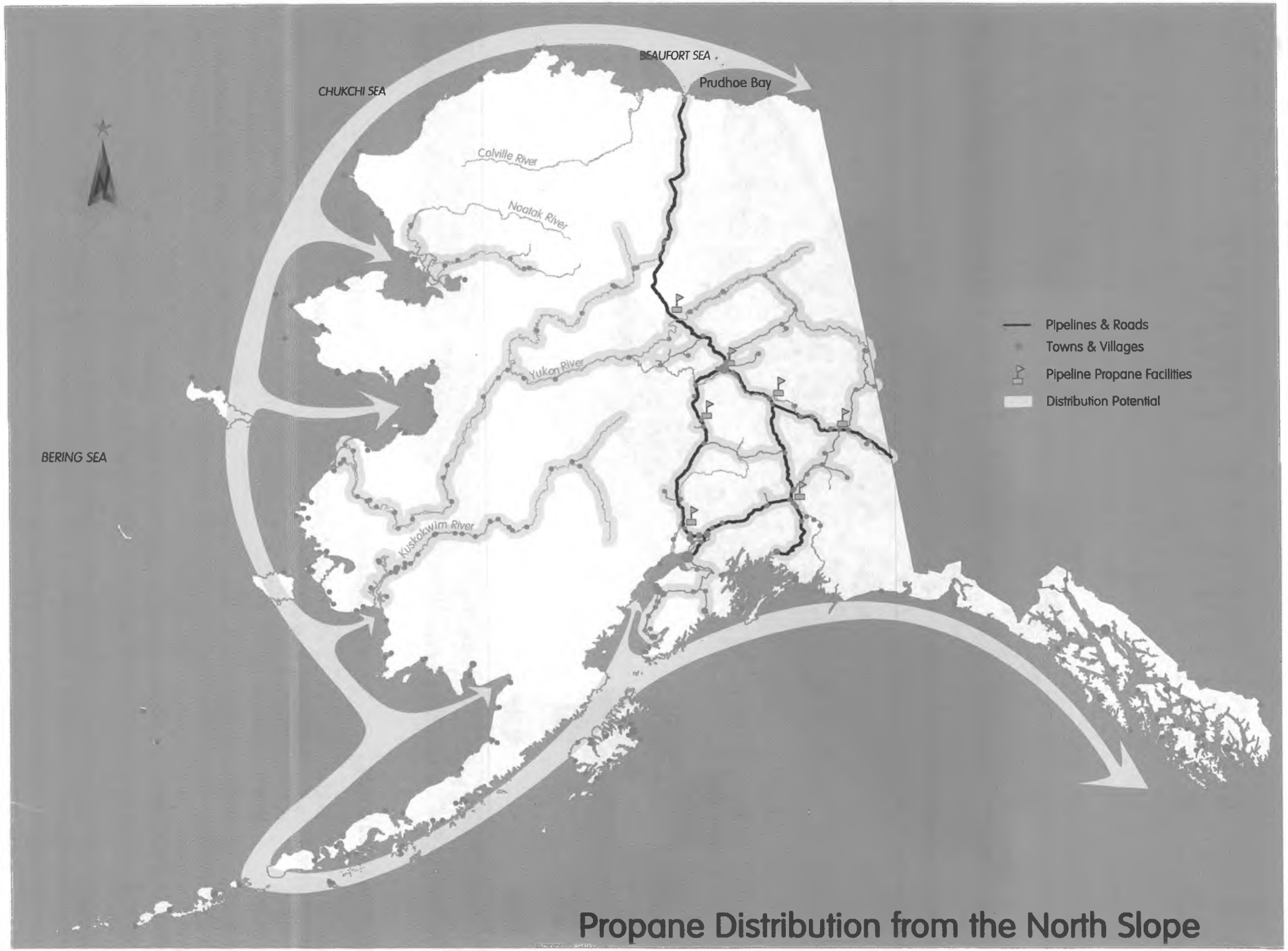
Dr. Dayton L. Alverson
First SSC Chairman, NPFMC
Retired, Marine Biologist

Kris E. Poulsen
Retired, Bering Sea Crabber

Dr. David Fluharty
Former Council Member, NPFMC

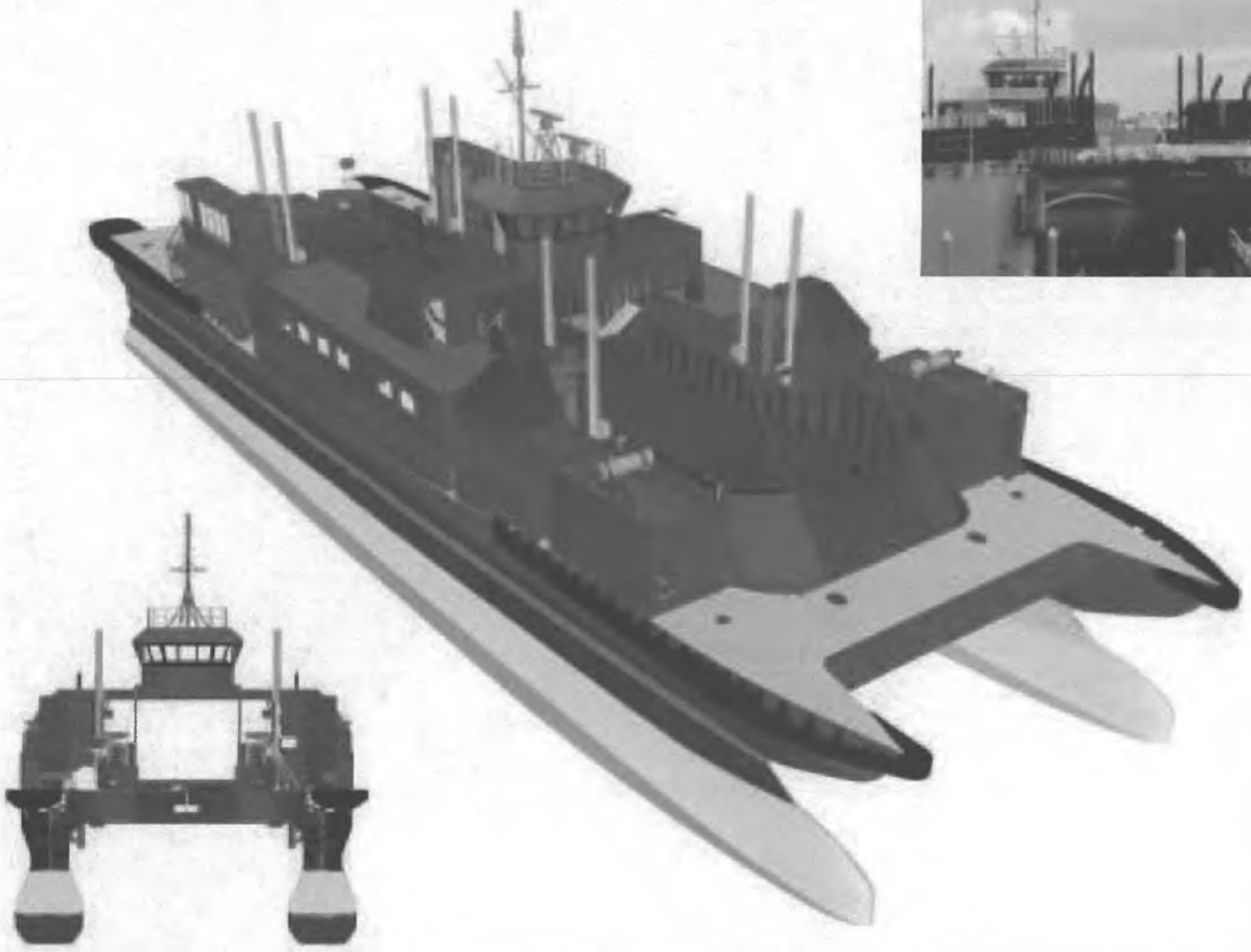
Vince o'Halloran
President, Puget Sound Ports Council - AFL-CIO

Dennis Petersen
Past President, NPFVOA
National Fisherman Highliner 1995
NPFVOA Safety Program Founder


BEAUFORT SEA
Prudhoe Bay
CHUKCHI SEA
Colville River
Noatak River
Yukon River
Kuskokwim River
BERING SEA
Pipelines & Roads
Towns & Villages
Pipeline Propane Facilities
Distribution Potential
Propane Distribution from the North Slope

M/V SUSITNA / E-CRAFT





Principal Characteristics

MAIN CHARACTERISTICS

Length Overall	59.54 m	(195.33 ft)
Length over Fenders	63.95 m	(208.83 ft)
Beam Overall	18.29 m	(60.00 ft)
Beam at Deck	17.68 m	(58.00 ft)
Design Draft	3.66 m	(12.00 ft)
Design Displacement		940 LT
Ice Navigation Draft	3.66m	(12.00 ft)
Ice Navigation Displacement		940 LT
Shallow Water Navigation Draft	1.52 m	(5.00 ft)
Shallow Water Navigation Displacement		940 LT

PERFORMANCE

Maximum Speed, Design Draft	20 knots
Cruise Speed, Design Draft	17 knots
Cruise Speed, Ice Navigation	10 knots
Cruise Speed, Shallow Draft	5 knots

MACHINERY

Propulsion Engines	4 x 2,700 HP · Diesel
Waterjets	4 x 2,700 HP · Axial Flow
Thrusters	2 x 1,600 HP, 360° Steerable
Generators	2 x 300 kW · Diesel

REGISTRATION

Type	High Speed Catamaran Ferry – SWATH
Owner	Office of Naval Research
Operator	Matsu-Susitna Borough
Builder	Alaska Ship & Drydock Inc.

CLASSIFICATIONS

IMO High Speed Craft Code
ABS Certified
✠ A1, (E), Ro-Ro Passenger Craft
Alaska Cook Inlet, AMS
Ice Class A0
SOLAS, MARPOL, COLREGS

2/21/12 Presenta-tion: Alaska Seafood Marketing Institute

<TARGET><BILL></BILL><SUBJECT>2-21-12 Presentation Alaska Seafood Marketing Institute</SUBJECT><COMM>HFSH27</COMM></TARGET>

Alaska Seafood Marketing Institute



ALASKA SEAFOOD®

Wild, Natural & Sustainable®

Celebrating 30+ years of successful partnership between the State of Alaska and the Alaska seafood industry!

The Codfish

The codfish lays ten thousand eggs,
The homely hen lays one.
The codfish never cackles
To tell you what she's done.
And so we scorn the codfish,
While the humble hen we prize,
Which only goes to show you
That it pays to advertise.



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Alaska's Seafood Industry



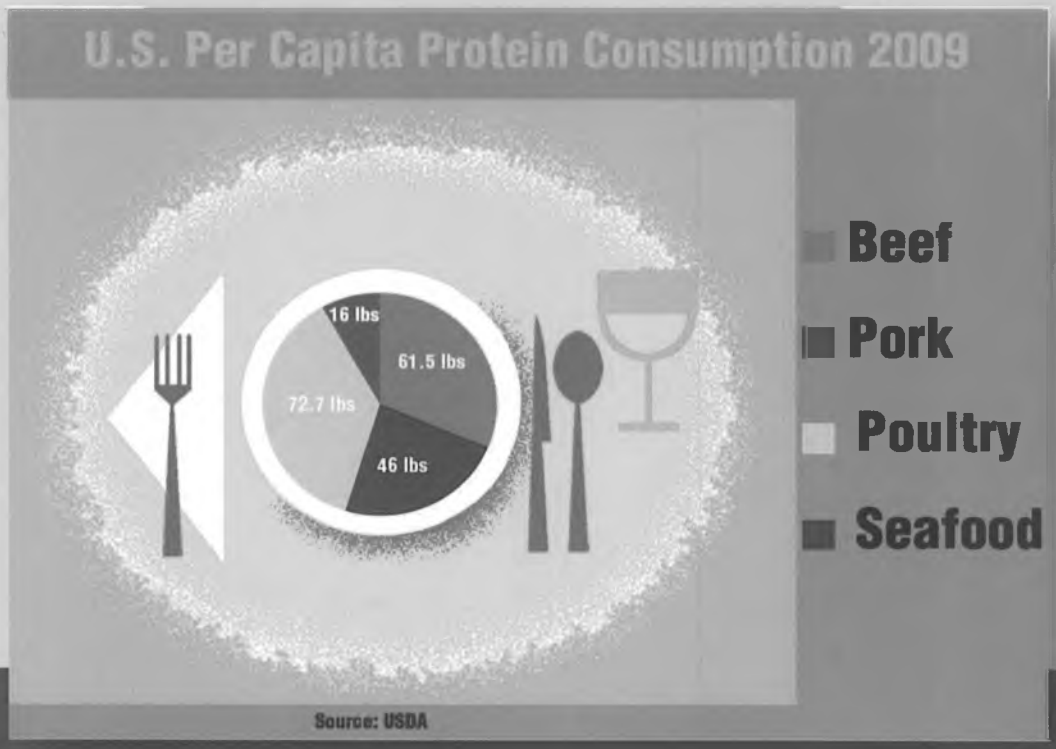


- Generated about $79 million in state taxes and fees, in addition to local fish taxes in fiscal year 2009
- Through direct, indirect and induced effects, contributed a total of $4.6 billion to Alaska's economic output in 2009
- Generated more than 80,800 jobs and $1.45 billion to labor and income
- Led all states in terms of both volume and ex-vessel value of commercial fisheries landings in 2010, with total of 1.91 million metric tons (MT) worth $1.7 billion
- Had one of the best seasons on record in 2010 with almost 170 million fish harvested in Alaska, the 11th highest number since statehood

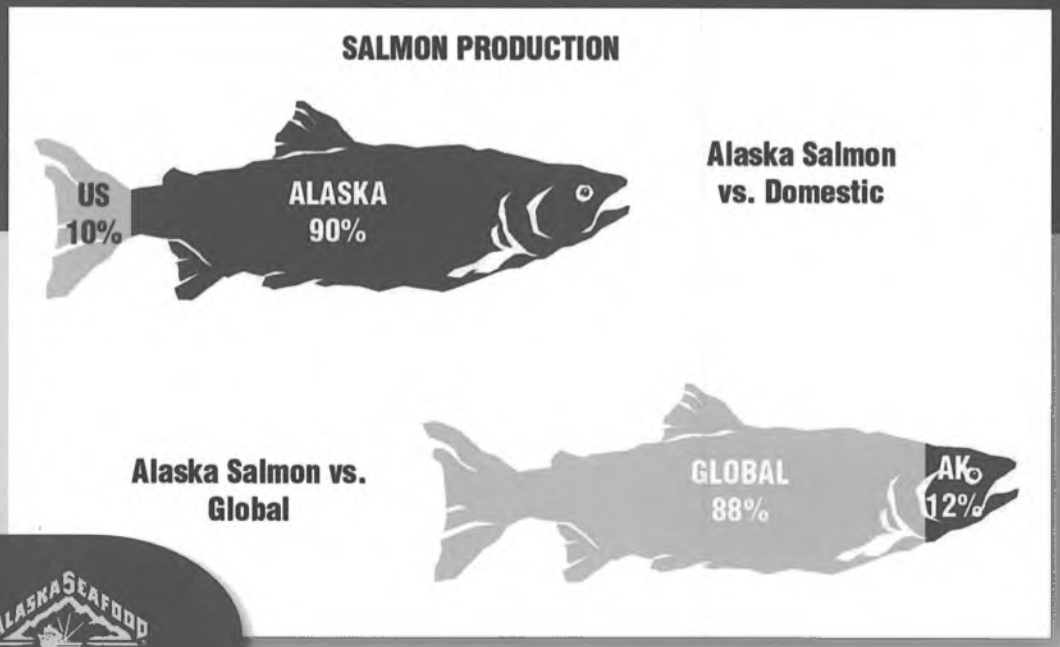
Source: Northern Economics, DOR, ADFG

ALASKA SEAFOOD

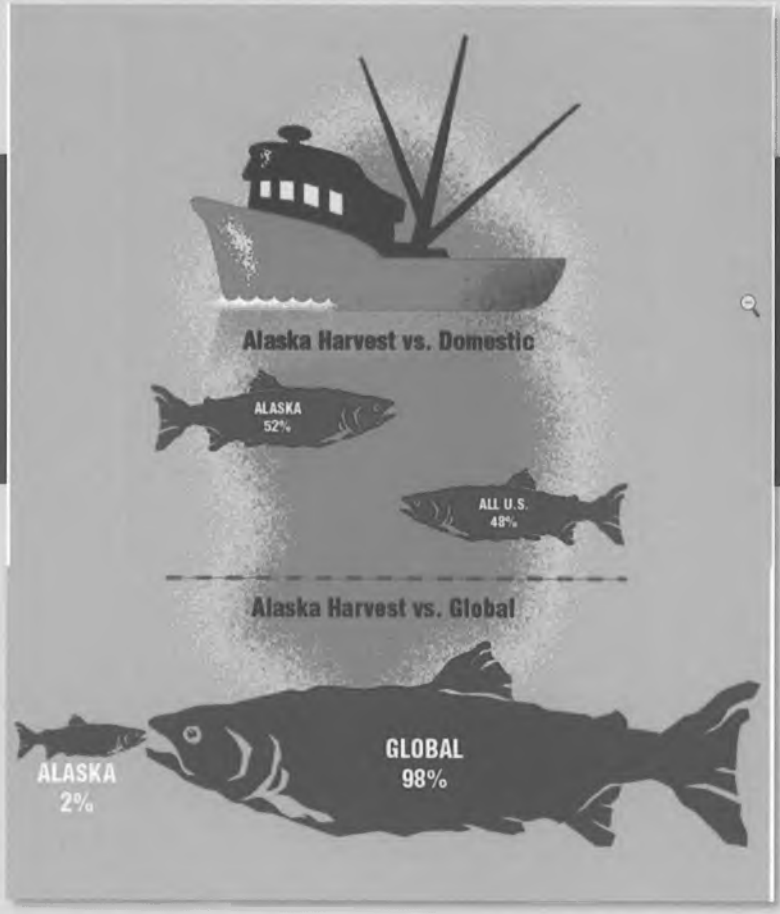
Wild, Natural & Sustainable®



Over 4.2 billion pounds of seafood were harvested from Alaskan waters in 2010.



TOTAL SEAFOOD VOLUME



Wild, Natural & Sustainable

ALASKA SEAFOOD PRODUCTION BY TYPE

BLUE = VALUE ORANGE = VOLUME



POLLOCK



SALMON

HALIBUT





PACIFIC COD

BLACK COD



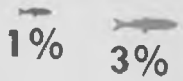


SHELLFISH



OTHER GROUNDFISH

HERRING



ALASKA SEAFOOD EXPORTERS TO THE WORLD

BASED ON DATA FROM 2010

Impact on Rural Communities

The seafood industry is a central piece of rural economies, providing:

- *Cash infusion to subsistence economies*
- *Economies of scale that often dramatically reduce the cost of :*
  - *Utilities*
  - *Shipping*
  - *Goods & Services*
- *Infrastructure essential to non-road communities*





ALASKA SEAFOOD

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What is the

Alaska Seafood Marketing Institute?

- *A **Partnership** of public and private sectors*
- *A **Public corporation** that fosters effective alignment with industry marketing efforts*
- *A **Governor-appointed Board** of Directors: five processors, two commercial harvesters*
- ***Alaska's official seafood promotion arm**, supports Alaska seafood industry through promotion of Alaska seafood products, education and research*







ALASKA SEAFOOD

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ASMI Mission Statement

The Alaska Seafood Marketing Institute is a marketing organization with the mission of increasing the economic value of the Alaska seafood resource through:

- *Increasing positive awareness of the Alaska Seafood brand,*
- *Collaborative marketing programs that align ASMI and the industry marketing efforts for maximum impact within the food industry,*
- *Long-term proactive marketing planning,*
- *Quality assurance, technical industry analysis, education, advocacy and research,*
- *Prudent, efficient fiscal management.*





ALASKA SEAFOOD
Wild, Natural & Sustainable

Lead by Industry

Board of Directors *- 7 members (5 processors, 2 harvesters)*

***Joe Bundrant**, Chair, Trident Seafoods*

***Bruce Wallace**, Commercial Harvester*

***Barry Collier**, Peter Pan Seafoods, Inc*

***Jack Schultheis**, Kwik'Pak Fisheries*

***Kevin Adams**, Vice Chair, Commercial Harvester*

***Mark Palmer**, Ocean Beauty Seafoods*

***Dennis Guhlke**, Icicle Seafoods, Inc.*



Board of Directors/Customer Advisory Panel
Cordova, AK – May 2011

- *ASMI promotes all species of Alaska seafood, under the "Alaska" brand.*
- *AS 16.51.110 prohibits ASMI promoting seafood by geographic origin other than from the state generally, geographic region of the state, or specified brand name.*
- *Alaska Constitution -Article 8, Section 4*

  "Sustained Yield – Fish, forests, wildlife, grasslands, and all other replenishable resources belonging to the State shall be utilized, developed, and maintained on the sustained yield principle, subject to preferences among beneficial uses."



ASMI Builds 'Alaska' Brand

ALASKA SEAFOOD
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Consumers associate the following descriptors with "Alaska".

"Fresh Seafood"

"Tastes Great"

"High Quality"

"Natural"

Alaska Seafood is the second most commonly specified brand on U.S. menus.

Source: TRD Frameworks, 2009



The Alaska Brand

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Alaska Seafood Audience

FY11 marked a shift in target audience to address both the current Boomer target audience and next generation of best Alaska seafood consumer, Gen Y.

Boomer

Consumer Research: 610 interviews, ages 45-54, college education, household income of $100,000+

- *Eight in ten Boomers believe it is important to know the source or origin of the seafood they plan to purchase (81% somewhat + very important).*
- *Seven in ten want to know the seafood is environmentally sustainable (73% somewhat + very important) and is naturally caught, or wild (71% somewhat + very important).*
- *Boomers feel either a certifying or an environmental group would be the most likely types of organizations to give an accurate assessment of seafood sustainability.*

Gen Y

Consumer Research: 759 interviews, ages 25-30, college education, household income of $50,000+

- 65% prefer to eat wild fish or seafood vs. 8% who prefer to eat farmed fish or seafood.
- The majority of Gen Y consumers believe it is important to know the source or origin of the seafood they plan to purchase (76%) and that the seafood is environmentally sustainable (74%).
- Half of Gen Y consumers say they would prefer to purchase Alaska Salmon if given a choice – topping Atlantic Salmon by a nearly three to one margin.

Source: TRD Frameworks, November 2010

ASMI Domestic & International Programs

Retail Marketing

International Marketing

Consumer Public Relations

Foodservice Marketing

Seafood Technical

Global Food Aid

With hands-on guidance from its seafood industry board of directors and input from dozen of industry experts serving on operational and advisory committees, ASMI applies a range of strategies and tactics tailored to fit specific market segments in the United States and overseas.







Above: Tom Sunderland, ASMI Salmon & Retail Marketing Committees;
Far left: Izetta Chambers, ASMI Salmon Committee;
Left: Chip Trinen, ASMI Seafood Technical Committee

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Domestic Retail Marketing

Program works to align with the Alaska Seafood Industry and retailers across the US to support their sales and marketing programs through in-store promotions, consumer advertising, public relations, and trade advertising.







Left: Constellation Wines; Middle: Winn Dixie; Right: ASMI Plated Salmon Shot

ALASKA SEAFOOD
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October Is National Seafood Month

Featuring Wild Alaska Seafood:
Wild, Natural & Sustainable™

GIANT EAGLE

ALASKA SEAFOOD



Try Wild Alaska Seafood. With its unrivaled texture and superior flavor, you'll taste the difference.

ALASKA SEAFOOD
Wild, Natural & Sustainable









Above: Website Landing Pages
Left: Trade Advertising Material

Domestic Foodservice Marketing



Program is designed to help commercial & non-commercial operators, including restaurants, chef networks, universities and culinary institutions, handle, menu and promote Wild Alaska Seafood products.



Captain D's



Top: Yale University – Iron Chef
Bottom: McCormick & Schmick's

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ALASKA SEAFOOD

Wild, Natural & Sustainable®

A division based promotion ...

wild for Lent

Order now for great savings!

A-Code	P-Code	Brand	Description	Pack Size	
5667787	362922	Harbor Banks-D	Cod, Pacific 8-16 Oz Fillet Boneless-Skinless Chem Free	3/15 Lb	$2.25 / Cs
8357634	541853	Bluewater-T	Flounder, Breaded 4 Oz Fillet Boneless-Skinless	40/4 Oz	$1.00 / Cs
6245468	156549	Bluewater-T	Flounder, Breaded 5 Oz Fillet Boneless-Skinless	10 Lb	$1.00 / Cs
5779913	400197	Harbor Banks	Halibut Loin Steaks 10 Oz.	10 Lb	$1.50 / Cs
5779848	400190	Harbor Banks	Halibut Loin Steaks 6 Oz.	10 Lb	$1.50 / Cs
5779897	400195	Harbor Banks	Halibut Loin Steaks 8 Oz.	10 Lb	$1.50 / Cs
5779784	400138	Harbor Banks	Halibut Regular Steaks 10 Oz.	10 Lb	$1.50 / Cs
5779343	400134	Harbor Banks	Halibut Regular Steaks 6 Oz.	10 Lb	$1.50 / Cs
5779350	400135	Harbor Banks	Halibut Regular Steaks 8 Oz.	10 Lb	$1.50 / Cs
5779517	400151	Harbor Banks	Halibut S/L Fillet Portion 10 Oz.	10 Lb	$1.50 / Cs
5779442	400144	Harbor Banks	Halibut S/L Fillet Portion 4 Oz.	10 Lb	$1.50 / Cs
5779475	400147	Harbor Banks	Halibut S/L Fillet Portion 6 Oz.	10 Lb	$1.50 / Cs
5779491	400149	Harbor Banks	Halibut S/L Fillet Portion 8 Oz.	10 Lb	$1.50 / Cs
4717096	278463	Harbor Banks-D	Pollock, 3 Oz Fillet Boneless-Skinless Chem Free	10 Lb	$1.00 / Cs
4722822	279118	Harbor Banks-D	Pollock, 4 Oz Fillet Boneless-Skinless Chem Free	10 Lb	$1.00 / Cs
4722815	279112	Harbor Banks-D	Pollock, 4 Oz Loin Boneless-Skinless Chem Free	10 Lb	$1.00 / Cs
4717211	278475	Harbor Banks-D	Pollock, 5 Oz Fillet Boneless-Skinless Chem Free	10 Lb	$1.00 / Cs
4982244	346463	Harbor Banks	Salmon, Keta 4 Oz Fillet Boneless Skin-On	10 Lb	$1.00 / Cs
4987004	346423	Harbor Banks	Salmon, Keta 4 Oz Fillet Boneless-Skinless	10 Lb	$1.00 / Cs
4987277	346467	Harbor Banks	Salmon, Keta 6 Oz Fillet Boneless Skin-On	10 Lb	$1.00 / Cs
4987012	346424	Harbor Banks	Salmon, Keta 6 Oz Fillet Boneless-Skinless	10 Lb	$1.00 / Cs
4987327	346472	Harbor Banks	Salmon, Keta 8 Oz Fillet Boneless Skin-On	10 Lb	$1.00 / Cs
4987020	346425	Harbor Banks	Salmon, Keta 8 Oz Fillet Boneless-Skinless	10 Lb	$1.00 / Cs
51599	17457	Bluewater	Salmon, Smoked Cold Mova Lox 1.5 Lb Side Skinless	2/1.5 Lb	$0.50 / Cs
5823869	409623	Harbor Banks	Salmon, Wild Keta S/O Fillet 10 Oz.	10 Lb	$1.00 / Cs
5823810	409618	Harbor Banks	Salmon, Wild Keta S/O Fillet 4 Oz.	10 Lb	$1.00 / Cs
5823828	409619	Harbor Banks	Salmon, Wild Keta S/O Fillet 6 Oz.	10 Lb	$1.00 / Cs
5823836	409620	Harbor Banks	Salmon, Wild Keta S/O Fillet 8 Oz.	10 Lb	$1.00 / Cs
5823711	409608	Harbor Banks	Salmon, Wild Keta Skls/Pbo Fillet 4 Oz.	10 Lb	$1.00 / Cs
5823752	409612	Harbor Banks	Salmon, Wild Keta Skls/Pbo Fillet 6 Oz.	10 Lb	$1.00 / Cs
5823778	409614	Harbor Banks	Salmon, Wild Keta Skls/Pbo Fillet 8 Oz.	10 Lb	$1.00 / Cs
8166296	533395	Bluewater-T	Surimi, Imitation Crabmeat Chunk & Flake Cooked Frozen	4/2.5 Lb	$0.50 / Cs
7360846	533404	Bluewater-T	Surimi, Imitation Crabmeat Chunk & Flake Cooked Frozen	4/2.5 Lb	$1.00 / Cs
6366298	533394	Bluewater	Surimi, Imitation Crabmeat Chunk & Flake Cooked Fan W/ Snow Crab	4/2.5 Lb	$1.00 / Cs

What a better way to kick off Lent than with Alaskan wild caught seafood!

U.S. Foodservice® is proud to provide an Alaska Seafood Marketing Institute (ASMI) focused Lent promotion.

Products Received Dates: March 1 - April 30, 2011

For more info on ASMI, check out the back!

HARBOR BANKS SEAFOOD

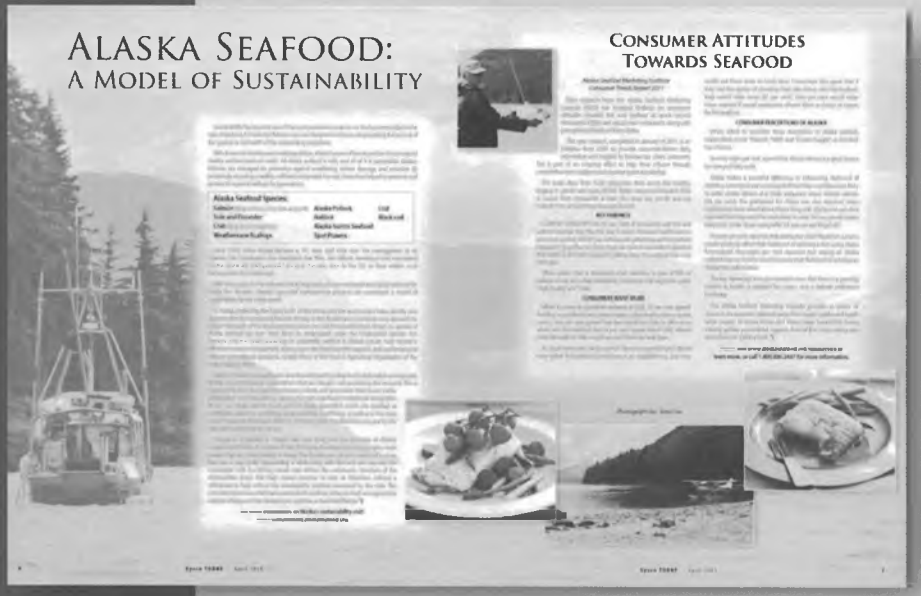
BLUEWATER seafood

For more information about Harbor Banks® and Bluewater® products, visit monarch.usfoodservice.com.

For internal use only. 02-2011

ALASKA SEAFOOD

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Left: Harbor Banks Seafood Top: SyscoToday Canada Bottom: Gordon Food Service







UMass – Longest Sushi Roll

300 volunteers

330 feet of sushi!

International Marketing

Program focuses on promotional efforts in key international markets: Japan, the European Union and China. The main activities include retail and foodservice promotions, technical seminars, chef and retail Alaska Seafood training, trade missions, advertising and public relations.

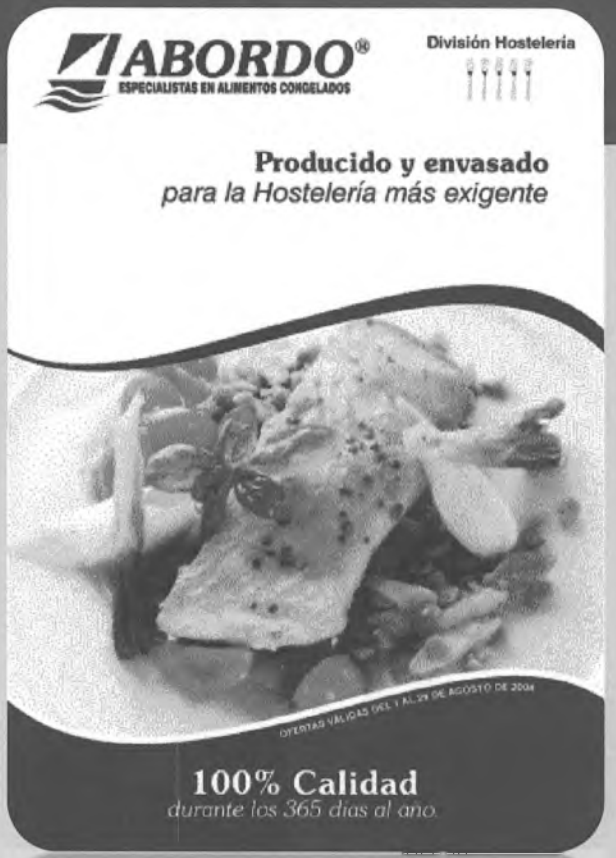


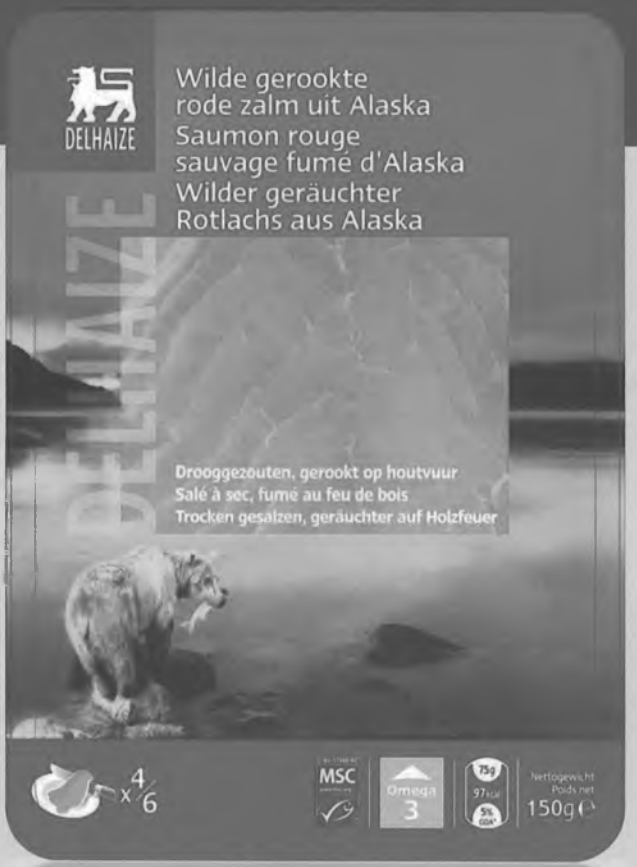












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Global Food Aid

The Alaska Canned Salmon Global Food Aid program was created in 2005 by the Alaska salmon fishing industry to foster the use of flavorful, nutritious and easy-to-prepare canned salmon in world food aid programs.





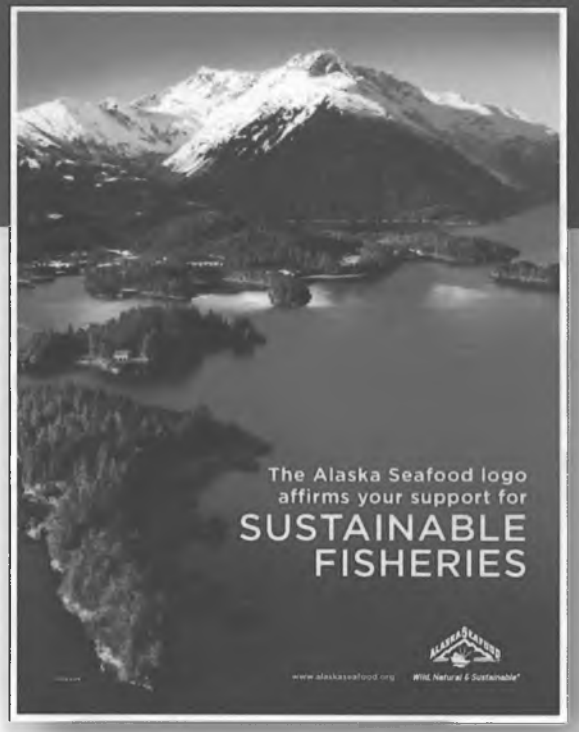


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Seafood Technical

The program works in collaboration with the Alaska seafood industry and the ASMI marketing staff to offer information on food safety, quality, nutrition, food labeling, environmental issues, fisheries sustainability and seafood purity.





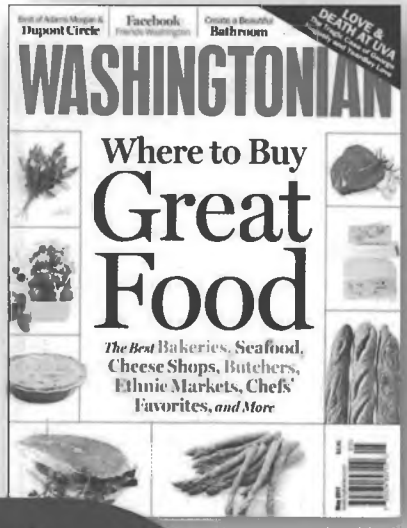




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Communications

The communications program supports the marketing staff through media relations, press interviews, participation in seafood industry trade shows, and the preparation of reports and press releases.



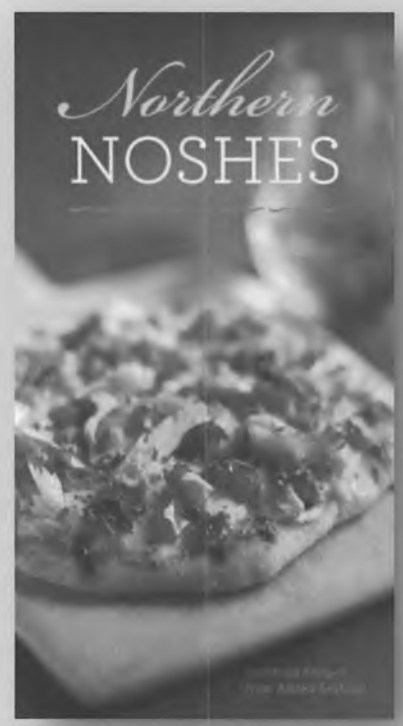




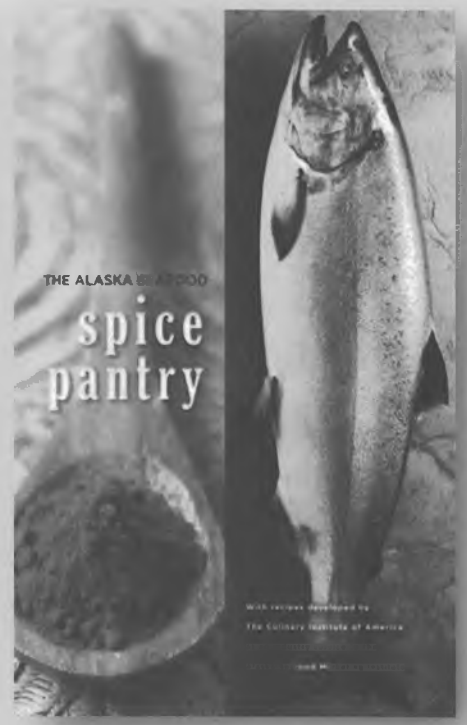
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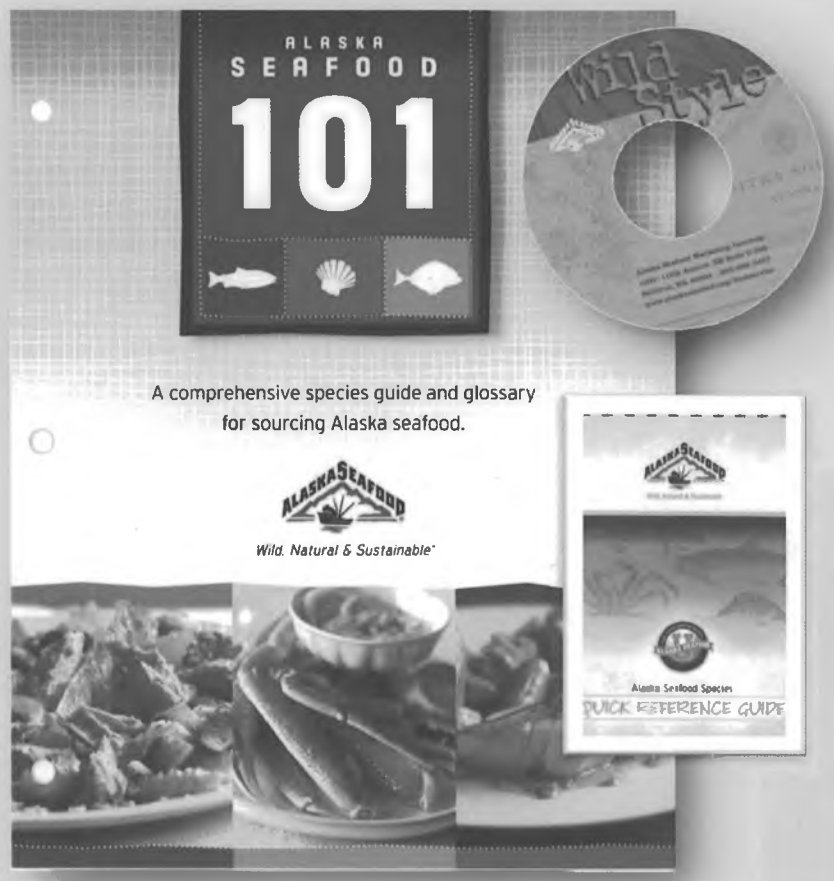






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ASMI Material: Recipe Cards & Cookbooks









ASMI Training Material





International Boston Seafood Show 2010









European Seafood Exposition 2011

May 3-5, 2011
Brussels, Belgium

$50,156,000 in onsite sales
$634,800,000 in 12 month projected sales

This is a gain of roughly $1 million more in onsite sales over 2010 and about a $130 million gain in 12 month projected sales over 2010.

Comfish, Kodiak, AK





HOFEX, Hong Kong, China







POLFISH, Gdansk, Poland

Rewe, Hamburg, Germany



ALASKA SEAFOOD
Wild, Natural & Sustainable

International & Domestic Events





Alaska Seafood Marketing Institute

Did you know an Alaska halibut can weigh over 500 pounds and grow up to 9 feet! How wild is that? http://www.nmfs.noaa.gov/fishwatch/species/pacific_halibut.htm



Like · Comment · Reshare · Monday at 12:42pm ·

30 people like this.

View all 5 comments 7 shares

Write a comment...

Social Media



January 31, 2012

Big Miracle Premier Party and Sustainable Seafood Luncheon in Washington, DC

Retail Director Larry Andrews represented ASMI at the Washington, DC Premier of the film *Big Miracle* on Wednesday, January 25. ASMI coordinated with Alaska Tourism to have Alaska Seafood Chef Alliance chef Robert Wiedmaier prepare wild Alaska sockeye salmon appetizers to the crowd. There was one downside to the event as People Magazine reported:

"The only downside to the night? Barrymore was so busy chatting with guests that she did not have a chance to sample the wild Alaskan sockeye salmon on DC chef Robert Wiedmaier's menu - selected as a nod to the film's Alaskan setting. Fortunately, the organizers made a special plate for her to enjoy afterwards. "She rubbed her hands and looked delighted," says the source."

...rillettes on a baguette and cured salmon with Asian... ...of Wiedmaier of the menu. "Being a hunter and fi... ...that I find, I have a strong appreciation of the bea... ...and especially, the purity of the fish found in Alaska w...

Wild, Natural & Sustainable

twitter

tumblr.

YouTube

Recent Challenges





ALASKA SEAFOOD

Wild, Natural & Sustainable

Significant international and domestic attacks on Alaska have ensued after major Alaska salmon processors withdrew from the MSC certification process in January, 2012.





"Alaskans are going to regret the path they are trying to go down"

"I think we're in a transition period where we are going to see the demise of hatcheries…"

"…we wrote into that statute that any fishery that wants to bear a California sustainable seafood label has to get certified by the MSC first."

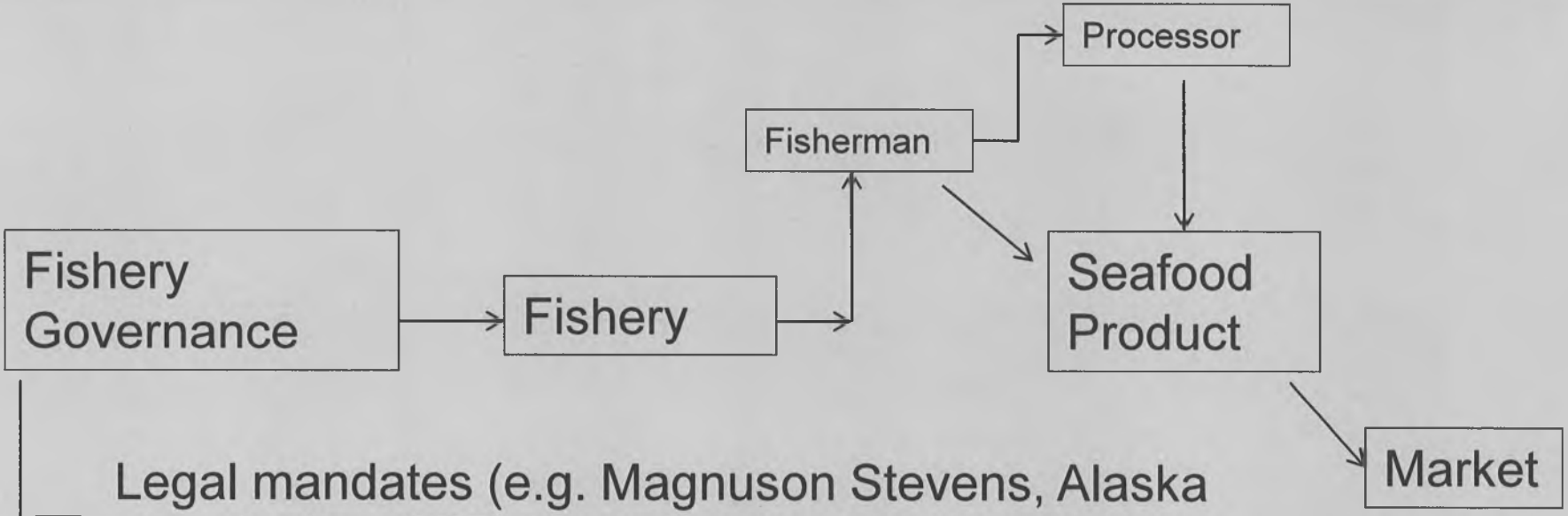
Mike Sutton
Monterey Bay Aquarium
MSC Founder
As quoted in *Intrafish*

Why withdraw? Concerns over:

- *Maintaining market access*
- *Potential NGO control of the fishery management process*
- *Long-term devaluation of the Alaska Seafood brand*
- *Ongoing and increasing costs of the MSC certification and pay-to-play eco-labeling*

Wild, Natural & Sustainable

What should be the role of the NGO?



- Legal mandates (e.g. Magnuson Stevens, Alaska constitution, CFP, Australian National Legislation
- FAO Guidance
- Competent Authority
- Stakeholders; Fishermen, Processors, Coastal Communities
- NGOs

Bottom Line

- *Who should manage the Alaska salmon fishery?*
- *Regardless of what we think of the MSC, and without necessarily criticising the MSC, the fishing industry simply cannot, as a matter of principle and form, tolerate a situation where a single private entity, on the basis of a changeable private standard, has sole authority to decide who can sell seafood to the public and who cannot.*
- *Common sense tells us that choice drives opportunity. It is about fisheries and their supply chain partners and their right to decide how to demonstrate best practice. This cannot happen without the availability of credible options.*

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Performance Details

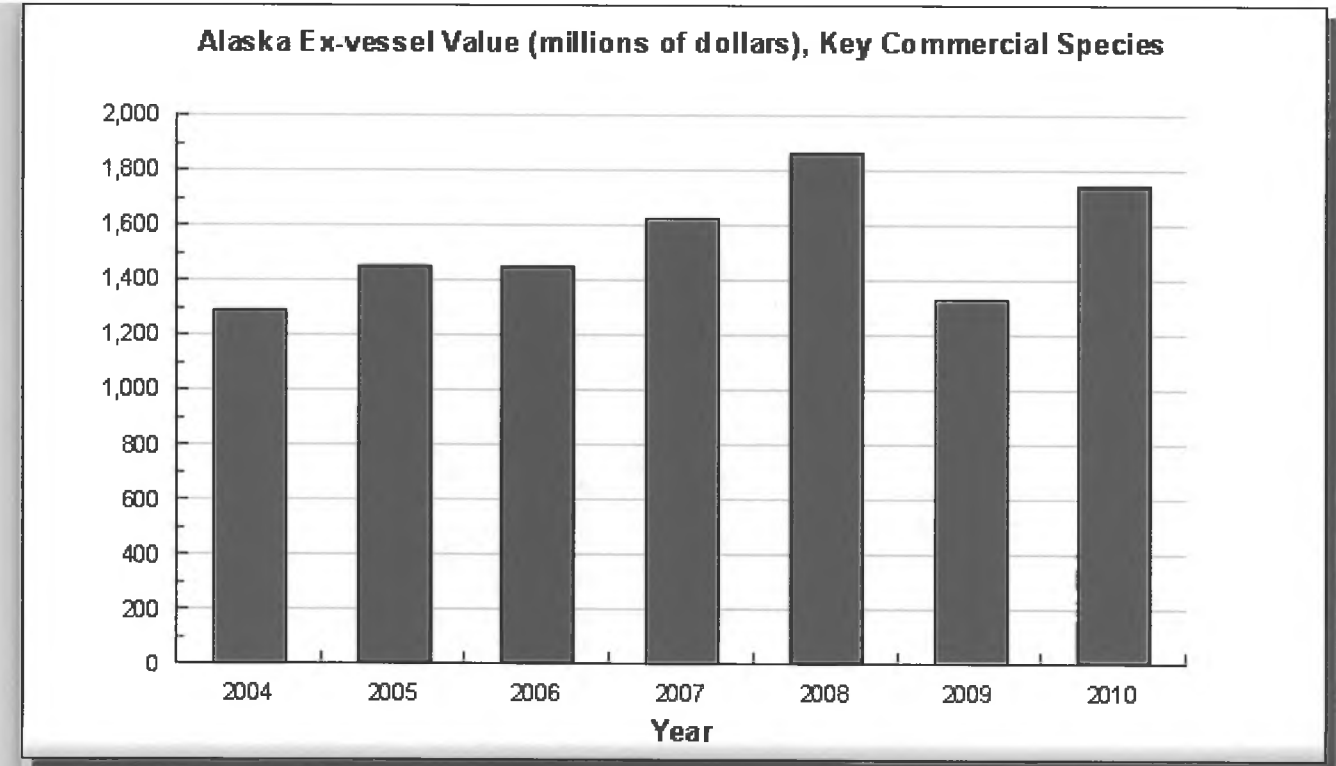


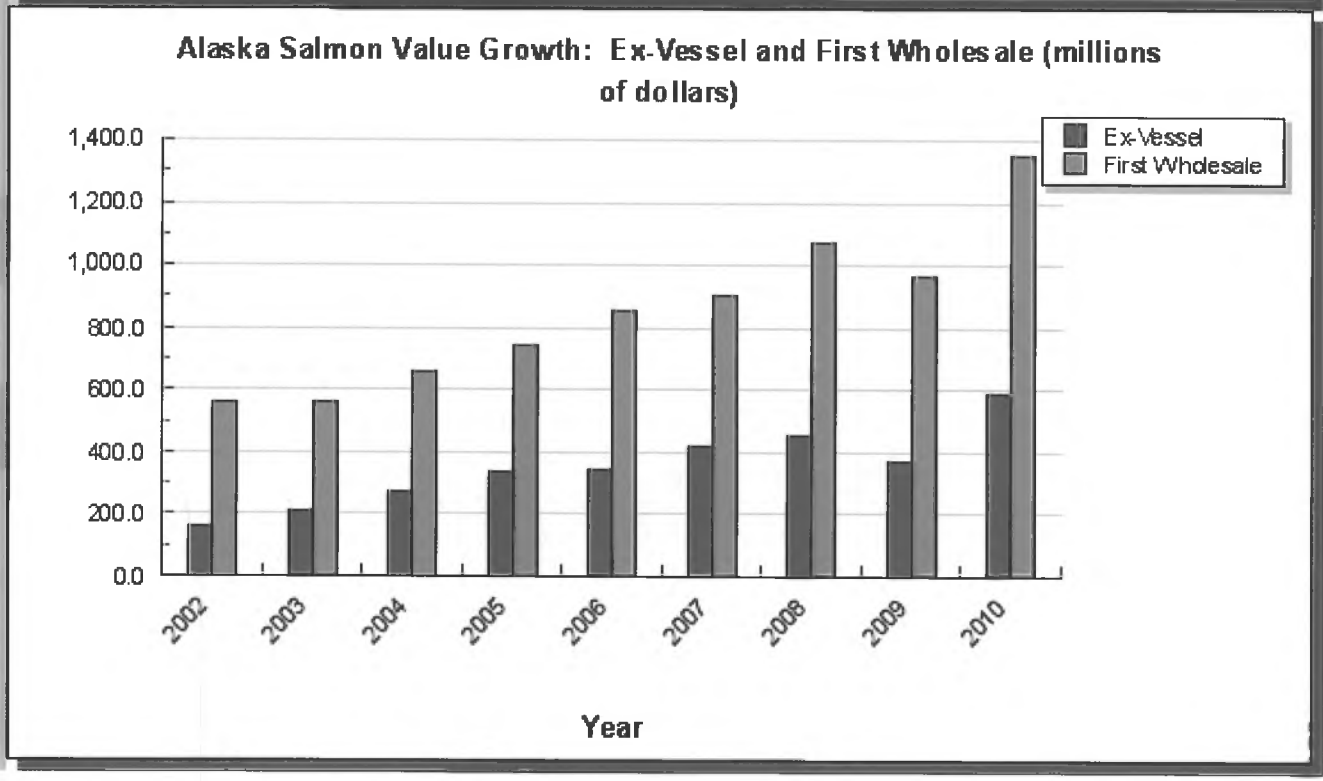




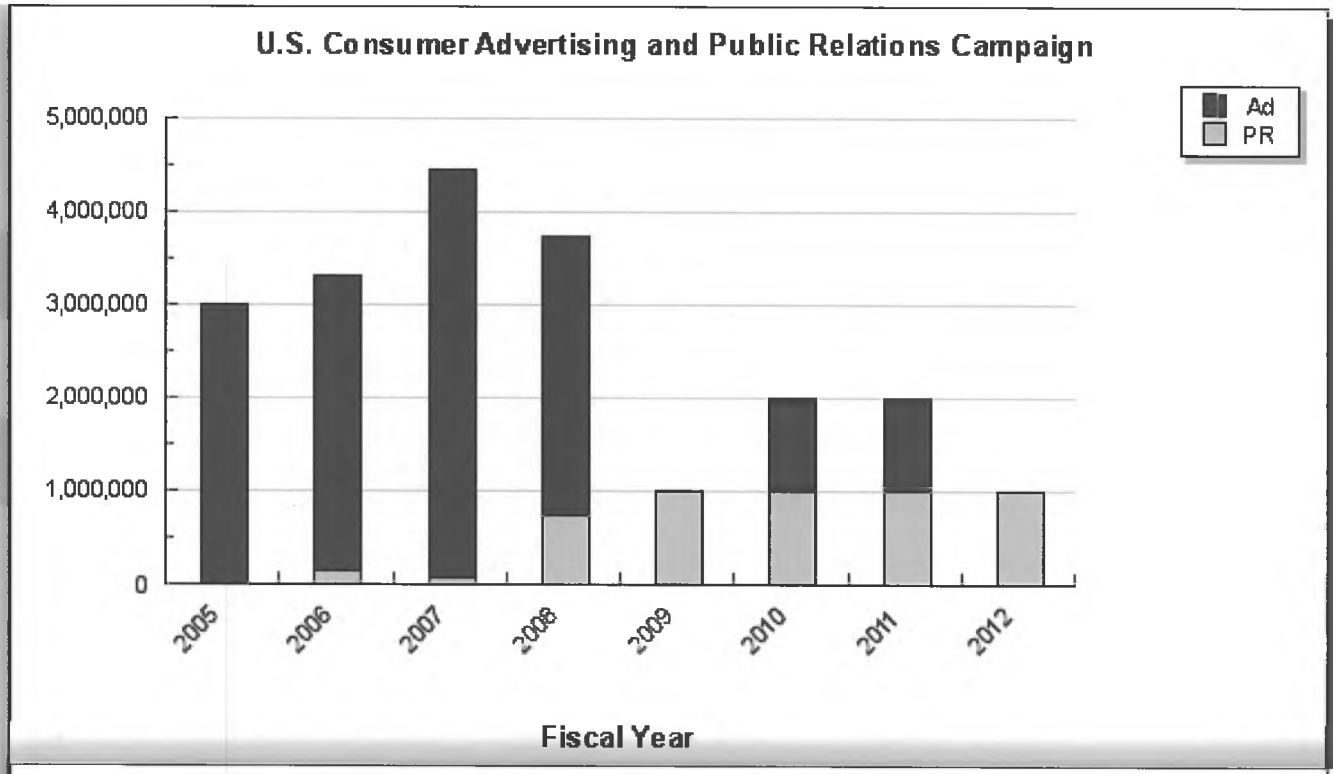
ALASKA SEAFOOD

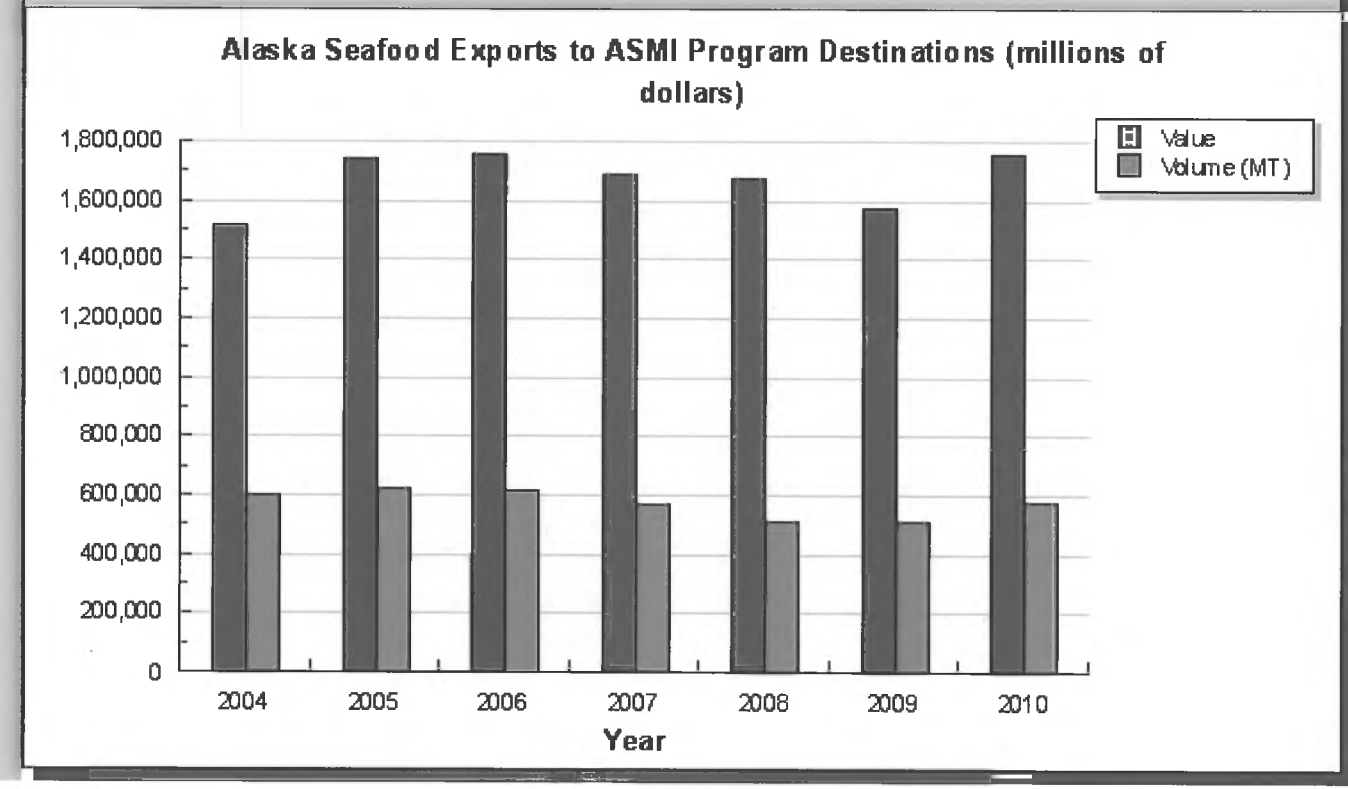
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Alaska Seafood
Wild, Natural & Sustainable

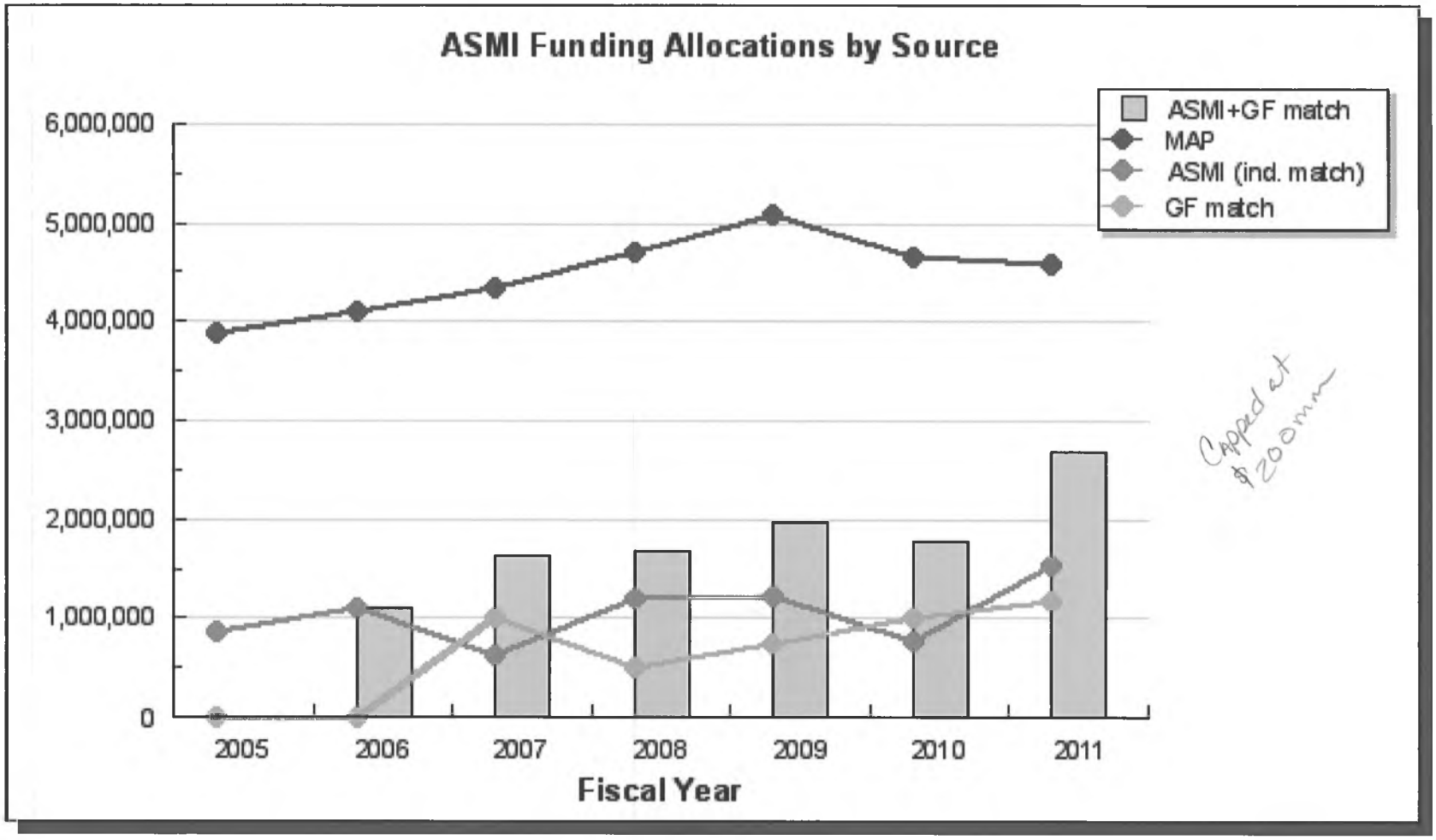




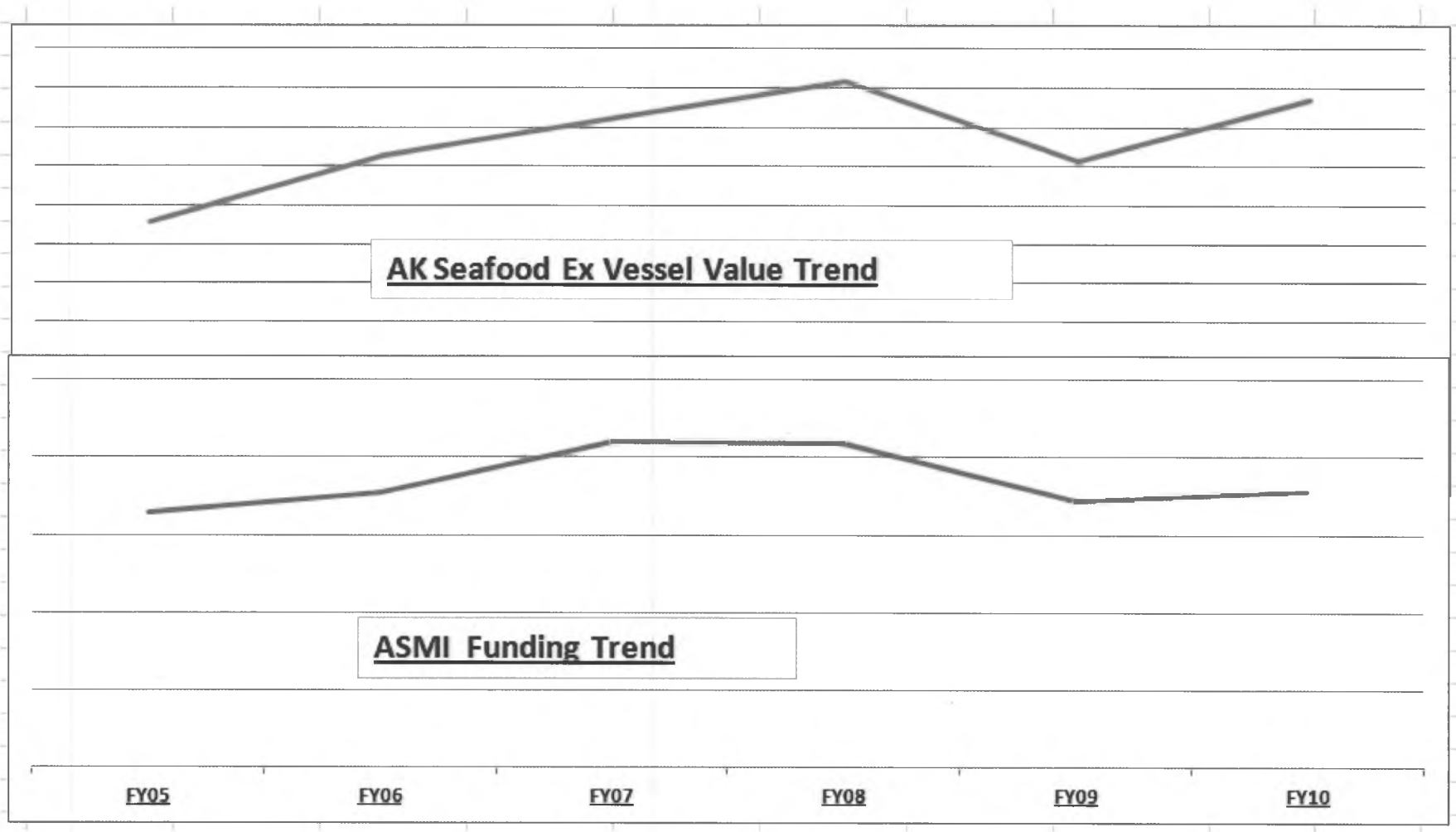
Wild, Natural & Sustainable

Alaska Seafood Marketing Institute Funding

Federal Market Access Program(MAP) • Seafood Assessment Tax (.5%) • State General Funds



Ex Vessel vs ASMI Funding



Alaska Seafood Marketing Institute
Component Detail

	FY2012 Management Plan	**FY2013 Governor**	**FY12 Management Plan vs FY13**
Fed Rcpts (MAP)	5,000.0	4,500.0	-500.0
Gen Fund	7,770.1	7,770.1	0.0
GF/Prgm (Industry)	7,054.0	7,612.2	558.2

Alaska Seafood Marketing Institute
FY13 Governor's Operating Budget

	FY12 Management Plan	FY13 Governor	FY12 to FY13
Personal Services	2272	2405.2	133.2
Travel	390.3	390.3	0
Services	16973.3	16898.3	-75
Commodities	180	180	0
Capital Outlay	8.5	8.5	0
Grants			
Total	**19824.1**	**19882.3**	**58.2**

Changes: FY12 to FY13 budget details:

Salary Adjustment

Increased Industry Receipts

Increased General Fund

Alaska Seafood

Wild, Natural & Sustainable

Thank You!



Wild, Natural & Sustainable®

311 North Franklin Street
Juneau, AK 99801
Phone: (907) 465-5560
Fax: (907) 465-5572
Website: www.alaskaseafood.org

Confir-mations 2011

<TARGET><BILL></BILL><SUBJECT>Confirmations 2011</SUBJECT><COMM>HFSH27</COMM></TARGET>

Alaska State Legislature

House of Representatives

Office of the Chief Clerk

Official Business

Thomas B. Stewart Legislative
Office Building, Room 202
Juneau, AK 99801-1182
Phone: (907) 465-3725
Fax: (907) 465-5334

MEMORANDUM

Date: February 2, 2011

To: Representative Thompson, Chair
House Special Committee on Fisheries

From: Suzi Lowell, Chief Clerk

Subject: Governor's Appointment(s)

The Speaker referred the following Governor's appointment(s) to the House Special Committee on Fisheries and the Resources Committee:

Commissioner – Department of Fish and Game
Cora Campbell
Appointed: 12/22/2010

Alaska Commercial Fisheries Entry Commission
Benjamin Brown – Juneau
Appointed: 3/1/2011 Term Expires: 3/1/2015

Board of Fisheries
Michael Smith – Fairbanks
Appointed: 4/23/2010 Term Expires: 6/30/2012

The Confirmation Committee Report, Referral for Confirmation page(s), resume(s), and a signature page are attached for your use. In addition, the resumes are also being sent electronically.

Attachments as noted

CONFIRMATION COMMITTEE REPORT

Action date: March 22, 2011

The **House Special Committee on Fisheries** has reviewed the qualifications of the Governor's appointee(s) as shown on the attached Referral for Confirmation forms(s) and recommends that the name(s) be forwarded to a joint session for consideration:

This does not reflect intent by any of the members to vote for or against this individual during any further sessions for the purposes of confirmation.

Signature:	Printed Last Name
	Brvift
	Johnson
	Miller
Chair:	Thompson

Please attach appointee Referral for Confirmation form(s) and return to the Chief Clerk's office.

CONFIRMATION COMMITTEE REPORT

Action date: March 22, 2011

The **House Special Committee on Fisheries** has reviewed the qualifications of the following Governor's appointee and recommends that this name be forwarded to a joint session for consideration:

Commissioner – Department of Fish and Game
Cora Campbell
Appointed: 12/22/2010

This does not reflect intent by any of the members to vote for or against this individual during any further sessions for the purposes of confirmation.

Signature:	Printed Last Name
	Pruitt
	Johnson
	Kawasaki
	MILLER
Chair:	THOMPSON

Please return to the Chief Clerk's office.

Alaska State Legislature

Official Business

House of Representatives

Office of the Chief Clerk

Thomas B. Stewart Legislative
Office Building, Room 202
Juneau, AK 99801-1182
Phone: (907) 465-3725
Fax: (907) 465-5334

REFERRAL FOR CONFIRMATION

Date Referred: February 2, 2011

Committee: **House Special Committee on Fisheries**

Alaska Commercial Fisheries Entry Commission
Benjamin Brown – Juneau
Appointed: 3/1/2011 Term Expires: 3/1/2015

Action Date: March 22, 2011
(Same date as on the accompanying signature page)

Note: Attach to a signature page and return to the Chief Clerk's office.

Alaska State Legislature

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Juneau, AK 99801-1182
Phone: (907) 465-3725
Fax: (907) 465-5334

REFERRAL FOR CONFIRMATION

Date Referred: February 2, 2011

Committee: **House Special Committee on Fisheries**

Board of Fisheries
Michael Smith – Fairbanks
Appointed: 4/23/2010 Term Expires: 6/30/2012

Action Date: March 22, 2011
(Same date as on the accompanying signature page)

Note: Attach to a signature page and return to the Chief Clerk's office.

Campbell, Cora
Commissioner - Department of Fish & Game

CORA J. CAMPBELL

OBJECTIVE

Consideration by the Joint Boards of Fish and Game as a candidate for Commissioner of the Alaska Department of Fish and Game.

SUMMARY OF QUALIFICATIONS

Comprehensive knowledge of Alaska's fish and wildlife and natural resource management issues.

Established working relationships with administration, legislature, agency staff, and user groups as well as experience in state and federal policy forums.

Currently responsible for working cooperatively with resource agency commissioners to develop and implement policies and programs for management of Alaska's natural resources.

Experienced in interdepartmental coordination, grants administration, budget development, coordination with the legislative branch, and representing the State of Alaska in federal policy arenas.

PROFESSIONAL EXPERIENCE

Fisheries Policy Advisor and Special Assistant 2007 - Present

Office of the Governor, Juneau, AK

Serve as fisheries policy advisor and special assistant in the Office of the Governor with responsibilities for fish and game, environmental conservation, Arctic policy, and natural resources. Work closely with Governor and commissioners to develop and implement administration policy on fisheries, wildlife, environmental and resource management issues.

Chair the Fisheries and Oceans sub-cabinet responsible for grants administration, development of fisheries and oceans policy, and interdepartmental coordination.

Serve as the Governor's representative to various boards and committees, including the North Pacific Fishery Management Council and the Alaska Seafood Marketing Institute Board of Directors.

Subsistence Outreach Coordinator 2005-2007

United Fishermen of Alaska, Juneau, AK

Coordinated education and outreach program to increase the number and diversity of users and interest groups involved in the federal subsistence fisheries management process. Produced newsletters, reports, and briefings focusing on interaction between federal and state fishery managers and impacts of federal management on non-subsistence user groups. Maintained extensive website dedicated to subsistence in Alaska and responded to inquiries.

January 11, 2010

Representative Steve Thompson
State Capitol, Rm. 428
Juneau, Alaska 99801-1182

Representative Thompson,

Re: Cora Campbell confirmation

On January 8, 2011, the Chitina Dipnetters Association (CDA) board of directors met with Cora Campbell, the Governor's nominee for Commissioner of the Alaska Department of Fish and Game. We discussed our concerns regarding her past ties to the commercial fishing industry and the applicability of her background and experience to lead the ADF&G. After our meeting, the CDA board of directors voted to rescind our previous letter of objection to this appointment. We are cautiously optimistic that Ms. Campbell will treat all user groups fairly and objectively if her nomination is confirmed. We support Governor Sean Parnell's nomination of Ms. Campbell as Commissioner of Fish & Game.

Mark Hem
for

Board of Directors, Chitina Dipnetters Association
1002 Pioneer Rd.
Fairbanks, Alaska 99701-2818

March 22, 2011 FSH Questions

Cora Campbell – Confirmation Hearing

- What is your view concerning the priority that is given to subsistence hunting and fishing in Alaska?
- How will you work to improve the relationship between ADF&G, the Board of Game, the Board of Fish, and Alaskan subsistence users?
- What will you do to address the low salmon returns to the Yukon-Kuskokwim over the last 15 years?
- Most people agree that we should manage the fish and wildlife of our state based upon the best scientific principles. What is your knowledge of the scientific principles upon which the management of these resources is based?
- Some people fear that since almost all of your experience stems from your commercial fishing background and related involvement with fishery related groups and boards, that you will be biased against other user groups. Why should people not fear this?

Ben Brown – Confirmation Hearing

- What is your vision for the CFEC?
- Which gear group permits are managed by the CFEC?
- What in your experience makes you particularly suited to this position?
- Should the CFEC do anything to prepare for the likely eventual opening of fisheries in Arctic waters off Alaska's north coast?

Michael Smith – Confirmation Hearing

- You have a diverse background in both subsistence and commercial fishing. How has this served you on the Board of Fisheries? How does your experience in both subsistence and commercial fishing help you make decisions when the two areas seem at cross-purposes?

Executive Director 2001-2007

Petersburg Vessel Owners Association, Petersburg, AK

Fisheries policy analyst and advisor for regional fishing association. Advocated for a diverse group of fishermen in state, federal, and international regulatory and legislative forums. Analyzed fisheries issues, prepared briefings, and provided policy guidance to board of directors. Negotiated passage of regulations, coordinated collaborative research projects with management agencies, and managed office and budget for association. Increased supporting membership in association by twenty percent.

Advisory Panel Member 2003-2006

North Pacific Fishery Management Council, Anchorage, AK

Provided policy guidance to North Pacific Fishery Management Council on conservation, management, and allocation decisions for federal fisheries off Alaska. Prepared amendments, motions, and testimony on fishery management proposals and served on various committees.

Subsistence Chair/Executive Committee Member 2001-2006

United Fishermen of Alaska, Juneau, AK

Leadership role in statewide fishing organization. Provided analysis, briefings, and policy guidance for state and federal subsistence management issues. Assisted in development and implementation of policies and representation of organization in various forums. Supervised subsistence program staff, budget, and operations.

Fisheries Committee Member 2002-2006

Southeast Conference, Juneau, AK

Served as a member of an advisory group tasked with providing conference members with policies and actions relevant to fisheries issues and economic development in Southeast Alaska.

Advisory Panel Member 2003-2004

North Pacific Research Board, Anchorage, AK

Served as a panel member responsible for recommending research and funding priorities to address fishery management needs in the North Pacific.

Commercial Fisherman 1992-2002

F/V Galatea, Petersburg, AK

Employed as seasonal crew for various commercial fisheries including salmon trolling, seining, and Dungeness crabbing.

EDUCATION

Bachelor of Arts in Education 2000

Pacific Lutheran University, Tacoma, WA

UNITED FISHERMEN OF ALASKA

211 Fourth Street, Suite 110
Juneau, Alaska 99801-1172
(907) 586-2820
(907) 463-2545 Fax
E-Mail: ufa@ufa-fish.org
www.ufa-fish.org

March 17, 2011

Representative Steve Thompson, Chairman
House Special Committee on Fisheries
Alaska State Legislature
State Capitol, 120 Fourth Street
Juneau, AK 99801-1182

RE: Support for Confirmation of Cora Campbell as Fish and Game Commissioner

Dear Chairman Thompson and Committee Members,

United Fishermen of Alaska (UFA) represents 38 Alaska commercial fishing organizations from fisheries throughout Alaska and the federal waters off our shores. UFA supports the confirmation of Cora Campbell as Commissioner of the Alaska Department of Fish and Game.

Campbell's experience in the state and federal fisheries management processes, and her experience as Fisheries Policy Analyst for Governor Palin and Natural Resources Policy Analyst for Governor Parnell provide her with broad knowledge of fish and game management throughout Alaska.

We support the approval of Ms. Campbell's appointment by the House Special Committee on Fisheries, and by the Alaska State Legislature.

Thank you for your consideration.

Sincerely,

Mark Vinsel
Executive Director

ALASKA FEDERATION
OF NATIVES

The Honorable Steve Thompson
Fisheries Chair
Room 428 State Capitol
Juneau, AK 99801-1182

March 3, 2011

Dear Representative Thompson,

It is my honor and privilege to be writing this letter on behalf of the Alaska Federation of Natives (AFN). As you may know, AFN is the largest statewide Native organization in Alaska. Its membership includes 178 villages (both federally-recognized tribes and village corporations), 13 regional Native corporations and 12 regional nonprofit and tribal consortiums that contract and run federal and state programs. AFN is governed by a 37-member Board, which is elected by its membership at the annual convention held each October. The mission of AFN is to enhance and promote the cultural, economic and political voice of the entire Alaska Native community.

We have met with Ms. Campbell on several occasions. While at first there may have been misgivings considering her age and experience, those misgivings were found to be unwarranted. She has a good fundamental base and understanding on the responsibilities of being the Commissioner of Alaska Department of Fish and Game. One major issue we discussed with Ms. Campbell is the importance of subsistence hunting and fishing by the people living in rural Alaska, and in particular, the Alaska Natives. We believe that we can work with her because she has an open mind and willing to address the issues of importance by the subsistence users of Alaska's fish and game resources.

AFN is offering its unqualified support for the confirmation of Ms. Cora Campbell as the next Commissioner of Fish and Game when the public hearing regarding her confirmation takes place.

Sincerely,

Julie E. Kitka

Julie Kitka
President

1577 C Street, Suite 300 • Anchorage, Alaska 99501 • tel 907.274.3611 • fax 907.276.7989 • www.nativefederation.org

Alaska Marine Conservation Council

BY EMAIL

February 22, 2011

Representative Eric Feige, Co-chair
Representative Paul Seaton, Co-Chair
House Resources Committee
Alaska State Legislature
Juneau, AK

Dear Representative Feige and Representative Seaton,

This is a letter to support the confirmation of Cora Campbell as commissioner of the Alaska Department of Fish and Game.

Alaska Marine Conservation Council (AMCC) is a community-based organization dedicated to protecting the long-term health of Alaska's oceans and sustaining the working waterfronts of our coastal communities. Our members include fishermen, subsistence harvesters, marine scientists, small business owners and families. Our ways of life, livelihoods and local economies depend on productive oceans.

We have worked with Ms. Campbell on fisheries issues before the North Pacific Fishery Management Council and Alaska Board of Fisheries. She has demonstrated a commitment to the conservation of our resources and the well-being of our fishery-dependent coastal communities. Ms. Campbell has represented the state's interests in the federal arena since she took over the state's seat on the North Pacific Fishery Management Council last October. In that important role she has been a leader in resolving fisheries conservation questions and defending opportunities for working fishermen in our communities.

Ms. Campbell has shown herself to be even-handed and inclusive of diverse perspectives of Alaskans with a stake in fisheries management. Her direct experience growing up in coastal Alaska actively engaged in natural resource use and management is extremely valuable. She understands the important state and federal management processes. Ms. Campbell is clearly very capable, hard working and committed to serving Alaska. We wholeheartedly support her confirmation.

Sincerely,

David J. Kubiak

Dave Kubiak, Chair
Board of Directors

cc: Governor Parnell

healthy oceans ... healthy communities

PO Box 101145 Anchorage, AK 99510 www.akmarine.org
tel 907.277.5357 *fax* 907.277.5975 *email* amcc@akmarine.org

AVCP
Association of Village Council Presidents
Administration
Pouch 219, Bethel, AK 99559

Raymond Watson, Chairperson
Myron P. Naneng Sr., President
Phone (907) 543-7300
Fax (907) 543-3369

FEB 28 2011

Akiachak
Akiak
Alakanuk
Andreafsky
Aniak
Atmautluak
Bethel
Bill Moore's Sl.
Chefornak
Chevak
Chuathbaluk
Chuloonawick
Crooked Creek
Eek
Emmonak
Georgetown
Goodnews Bay
Hamilton
Hooper Bay
Lower Kalskag
Upper Kalskag
Kasigluk
Kipnuk
Kongiganak
Kotlik
Kwethluk
Kwigillingok
Lime Village
Marshall
Mekoryuk
Mtn. Village
Napaimiut
Napakiak
Napaskiak
Newtok
Nightmute
Nunakauyak
Nunam Iqua
Nunapitchuk
Ohogamiut
Oscarville
Paimiut
Pilot Station
Pitka's Point
Platinum
Quinhagak
Red Devil
Russian Mission
Scammon Bay
Sleetmute
St. Mary's
Stony River
Tuluksak
Tuntutuliak
Tununak
Umkumiut

February 24, 2011

Honorable Governor Sean Parnell
State of Alaska
P.O. Box 110001
Juneau, Alaska 99811-0001

Dear Governor Parnell,

The Association of Village Council Presidents is writing this letter to support the confirmation of Mrs. Cora Campbell as the Commissioner of The Alaska Department of Fish and Game. During their meeting held February 17, 2011, the AVCP Executive Board voted unanimously to do so.

We believe Mrs. Campbell will bring change to the department in how it approaches the subsistence resource issues. She is committed to improving communications and working relations between the federal and state agencies, Tribal Consortiums and Tribes involved in the policy making decisions. She will listen to our concerns and allow us to have a voice. We feel she has a willingness to learn about our subsistence ways and will be respectful of them. With a commitment to keep open dialogue, she will be aware of how decisions affect our cultural and traditional ways of life.

Mrs. Campbell also agrees there should be more Native and rural representation on the state and federal boards and would welcome us to sit at the table with her. AVCP looks forward to working with Mrs. Campbell.

Sincerely,

Myron Naneng Sr.
President

Cc: Senators: Hoffman, Kookesh, Olson, Stedman, Egan,
Representatives: Herron, Austerman, Edgmon, Foster, Joule, Feige, Dick, Johansen
Kerttula, Munoz, Seaton, Thomas, Wilson
Commissioner Cora Campbell; Rural Advisor, John Moller

North Pacific Fisheries Association
P.O. Box 796
Homer, Alaska 99603

March 14, 2011

Rep. Paul Seaton
House Special Committee on Fisheries
Alaska State Legislature

Dear Representative Seaton;

The North Pacific Fisheries Association in Homer represents fishermen who fish throughout the state. Our members participate in fisheries from Ketchikan to Attu to St. Mathews. We are writing to ask that you support the confirmation of Cora Campbell as Commissioner of ADF&G.

Ms. Campbell is undoubtedly the best qualified person in our state for this position. She enjoys broad support from the fishing industry. She is well regarded by her fellow employees in the Department. And most importantly she knows the important issues regarding fishery resources facing the state. The Governor made a good choice in naming Ms. Campbell acting Commissioner.

We appreciate your consideration on this important matter.

Sincerely,

Michael B. Laukitis
President

Cc: Senator Gary Stevens
Governor Parnell

Dec 22 10 05:32p Shelly Laukitis 907 548 2210 p.1

SFW Alaska
P.O.Box 4096 – Palmer, AK 99645 907-746-GAME

March 16, 2010

Dear Representative:

As you approach confirmation of the Governor's appointments, the Board of Directors of the Alaska Chapter of Sportsmen For Fish and Wildlife unanimously encourages a "yes" vote for Ms. Cora Campbell as Commissioner of the Alaska Department of Fish and Game.

As you know, SFW-Alaska membership includes more than 2,000 Alaskans whose goal is supporting management for abundance of Alaska's fish and game resources.

Sincerely,

SPORTSMEN FOR FISH AND WILDLIFE – ALASKA

Ralph C. Seekins

Ralph Seekins
President



January 18, 2011

VIA FACSIMILE AND FIRST CLASS MAIL

Rep. Paul Seaton, Co-Chair
House Resources Committee
State Capitol
Juneau, AK 99801-1182

Rep. Eric Feige, Co-Chair
House Resources Committee
State Capitol
Juneau, AK 99801-1182

Re: Ms. Cora Campbell Confirmation

Dear Representative Seaton and Representative Feige:

Yukon Delta Fisheries Development Association (YDFDA) strongly supports the confirmation of Ms. Cora Campbell as Commissioner of the Alaska Department of Fish and Game. YDFDA is one of the six Western Alaska Community Development Quota groups, which are economic development non-profit organizations as authorized in the Magnuson Fishery Conservation and Management Act. YDFDA represents the Western Alaska communities of Emmonak, Alakanuk, Mountain Village, Nunam Iqua, Kotlik and Grayling, with a population of over 3,200.

As part of its statutory purposes, YDFDA is charged with economic development in its region. This means that we are deeply involved on many levels with the commercial and subsistence harvest of Yukon River salmon, eels and whitefish. Also, as a part of our statutory purposes, we participate through ownership and local resident job placement in the commercial fisheries of the Bering Sea. As a CDQ group, YDFDA is self sufficient and receives no funds from any state, federal, or private source and we are directly responsible for the employment of over 400 area residents and the yearly payment of wages and fish payments of over $2,500,000 in one of the poorest areas of the State.

Yukon Delta Fisheries Development Association
Representing the Alaskan Communities of · ALAKANUK · EMMONAK · GRAYLING · KOTLIK · MOUNTAIN VILLAGE · NUNAM IQUA
T 907.644.0376 · F 907.644.0327 · 1016 West Sixth Avenue, Suite 301 · Anchorage, AK 99501

Ms. Campbell has been a pleasure to work with as Governor Parnell's fishery policy aide and she will be missed from that position. She is extremely knowledgeable about all aspects of Alaska fisheries, from fresh to saltwater, and can also bring a harvester's perspective to the issues, which is very valuable. She also knows the issues that are important to the residents of rural Alaska, including subsistence fishing and hunting. We have found her accessible, open minded, willing to listen to all sides of an issue, and committed to make decisions in an open and transparent manner. We think she will be a successful Commissioner and will excel at making ADF&G work for the people of the State of Alaska that depend on the State's natural resources.

As commissioner, we believe that Ms. Campbell will continue to work well with our organization as well as other Western Alaska interests and Alaska interests in general. If confirmed, we believe that the legislature will find her a hard working commissioner determined to protect and utilize Alaska's fish and game to the greatest extent possible. If you have any questions, please feel free to contact me.

Very truly yours,

YUKON DELTA FISHERIES DEVELOPMENT ASSOCIATION

Ragnar Alstrom, Executive Director

cc: Governor Sean Parnell
Representative Neal Foster
Representative Reggie Joule
Representative Bob Herron
Representative Bryce Edgmon
Representative Alan Austerman
Representative Bill Thomas
Commissioner Cora Campbell

Yukon Delta Fisheries Development Association
Representing the Alaskan Communities of · ALAKANUK · EMMONAK · GRAYLING · KOTLIK · MOUNTAIN VILLAGE · NUNAM IQUA
T 907 644 0326 · F 907 644 0327 · 1016 West Sixth Avenue, Suite 301 · Anchorage, AK 99501

January 12, 2011

Dear Senator Gary Stevens and Representative Paul Seaton;

I attended your community meeting in Homer last week and wanted to send a quick note regarding an issue I'm concerned about. I hope you will both consider the impacts of Ms. Cora Campbell's appointment as commissioner of the Alaska Department of Fish and Game. I cannot support this appointment; she is not an appropriate candidate and will discredit the entire department if confirmed.

I'd like to tell you a little about myself: I'm a graduate student at the University of Alaska Fairbanks, I am in the anthropology department but also a member of the National Science Foundation's Resilience and Adaptation Program. My dissertation work is related to coastal community identity in the Gulf of Alaska particularly as it pertains to transitions in commercial fishery resources, fisheries policy and climate change. I will be conducting case study work in Cordova and one other community larger than 1500 people (probably Valdez). Currently, I also have a generous research fellowship from the Prince William Sound Science Center.

Under normal circumstances, the Alaska Department of Fish and Game is an agency where I would seek continuing research or employment opportunities. The social dimensions of commercial (and subsistence) fisheries in the state of Alaska are among my primary research interests. However, the credibility of the agency will have significant impacts if Ms. Campbell becomes the commissioner. I have spent approximately eight years in graduate school (at the University of Washington, prior to UAF) studying fisheries issues in the state of Alaska and to see someone with no educational background in this field become the commissioner is seriously disheartening. In the past few weeks as I see announcements related to employment or research opportunities at ADFG, I am already finding myself disregarding them. There is so much work to do in the field of fisheries and marine resources of Alaska and this agency should be very much involved in on-going projects. I hope that the agency will continue to function with credibility.

I realize that Ms. Campbell has a personal, family background in commercial fisheries—and that is a bonus, it provides a true sense of awareness of the industry but that is not enough. I also have had the opportunity to participate in commercial fisheries with my family but I rarely promote that experience when I am working on research and educational projects related to fisheries. The Alaska Department of Fish and Game should operate as a scientifically based organization with research conducted with contemporary standards. The commissioner needs to know how to do this and set an example for it, not just act as a political figure.

Thank you for the opportunity to express concern over this issue. I urge you not to support this appointment and to do what you can to challenge it.

Sincerely,
Emilie Springer

KETCHIKAN HERRING ACTION GROUP
7942 South Tongass Highway
Ketchikan, Alaska 99901
(907) 225-3697

January 2, 2011

Dear Legislator,

This letter is to inform you that we join with the Alaska Native Brotherhood *in opposing* the appointment of Cora Crome Campbell by Governor Parnell to head the Alaska Department of Fish and Game.

Cora Campbell was formerly appointed to be Governor Palin's fisheries advisor following the recommendations of the Petersburg Vessel Owners Association, which she was former Executive Director of.

During her tenure as fisheries advisor to the governor, it was difficult if not impossible to reach the governor on issues that related to subsistence, sport fishing, and conservation. Her own interests and lack of experience are well known throughout Southeast Alaska.

As commissioner of the Alaska Department of Fish and Game, we are concerned that her focus will be more on "maximum yield" rather than on "maximum sustainable yield" when it comes to fisheries interests involving her former colleagues, supporters, and personal family members operating in the herring industry. This can be detrimental to many fisheries stocks in Alaska, create further division among user groups, and foster a degree of mistrust with the Department of Fish and Game at a time when all interests need to work together.

We have seen no evidence that her former agenda will not carry over in her position as commissioner of the Alaska Department of Fish and Game.

Considering her conflict of interest and lack of experience in biological and critical habitat issues, please vote NO to the appointment of Cora Campbell as commissioner of the Alaska Department of Fish and Game.

Very Sincerely,

Andy Rauwolf, Chair
Ketchikan Herring Action Group
7942 South Tongass Hwy.
Ketchikan, Alaska 99901

From: sara jackinsky [mailto:sarajackinsky@gmail.com]
Sent: Friday, March 18, 2011 11:33 AM
To: Rep. Alan Austerman; Rep. Alan Dick; Rep. Berta Gardner; Rep. Bob Herron; Rep. Bob Miller; Rep. Cathy Munoz; Rep. Craig Johnson; Rep. Eric Feige; Rep. Lance Pruitt; Rep. Neal Foster; Rep. Paul Seaton; Rep. Steve Thompson; Rep. Wes Keller; Sen. Bert Stedman; Sen. Bill Wielechowski; Sen. Gary Stevens; Sen. Hollis French; Sen. Joe Paskvan; Sen. Joe Thomas; Sen. Lesil McGuire; Sen. Tom Wagoner
Subject: ADF&G Commissioner. Please do not confirm Cora Campbell.

Sara Jackinsky
PO Box 1044
Homer, AK 99603
907.235.6417
sarajackinsky@gmail.com

I urge a vote against confirmation of Cora Campbell as Commissioner of Fish and Game.

Fish and Game resources are important and vital to Alaska. The people of Alaska are entitled to the best leadership available in this area.

Ms. Campbell is not qualified to hold this position. Ms. Campbell holds ONLY a BA in Education from Pacific Lutheran University. She has no scientific background. She has no research background. She has no conservation background. She has no education in fisheries issues. She has no statistical background. She has no economic background. Her experience includes attending meetings, her resume states she has been fishing since early 1990's. She is age 31 now so this would put her at about age 10. Are you seriously considering this as professional experience or is this just padding her resume. It appears that her entire resume is heavily padded.

If this appointment is confirmed it is a slap in the face to those involved in commercial fishing, sport fishing, subsistence fishing in Alaska, as well as a detriment to the fish and game resources of Alaska. It is a slap to those who have pursued their education in fisheries and related fields, and to all others who have worked hard at their education.

Please, let's honor this State and it's resources. The people of the State of Alaska deserve a Commissioner who is knowledgeable, who has a background and EDUCATION in an appropriate area (in this case fisheries, biology, natural resources, etc), who has experience.

If this appointment goes through, it is merely a case of "who you know," with no regard to the importance of the position. An appointment with these qualifications is not a healthy nor an appropriate way to conduct the business of such an important resource.

Again, I urge denial of confirmation this appointment.

Regards,

Sara Jackinsky

WACDA

WESTERN ALASKA COMMUNITY DEVELOPMENT ASSOCIATION

March 21, 2011

State of Alaska House of Representatives
House Special Committee on Fisheries of the 27th Legislature
Representative Steve Thompson, Chair
State Capitol, Room 428
Juneau, AK 99801-1182

Dear Representative Thompson:

On behalf of the six CDQ entities, the 65 eligible CDQ communities and the more than 29,000 residents of western Alaska, the Western Alaska Community Development Association extends its support for the confirmation of the appointment of Cora Campbell as Commissioner of the Alaska Department of Fish and Game.

As a lifelong Alaskan, Ms. Campbell has been exposed to multiple facets of the fishing industry. From her experience with state and federal fishery and regulatory forums to her service to the North Pacific Fisheries Management Council, the Exxon Valdez Oil Spill Trustee Council, and the North Pacific Research Board, Campbell has developed a fine-honed sense of the challenges and opportunities encompassed in Alaska's fisheries. She understands how inextricably the communities and residents of western Alaska are tied to the fishery resources of the Bering Sea. Campbell has dedicated countless hours to representing the best interests of all Alaskans, advocating for Alaska's fishing, hunting, and wildlife viewing opportunities. Through her attention to detail, grace under pressure, and even temperament, she is distinguishing herself as a leader.

For these reasons and more, the Western Alaska Community Development Association urges your full support of the appointment of Cora Campbell as the Commissioner of the Department of Fish and Game. Please call on us if we can provide additional information or support for Ms. Campbell's appointment.

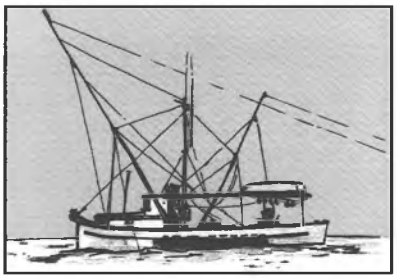
Sincerely,

WESTERN ALASKA COMMUNITY DEVELOPMENT ASSOCIATION

Aggie M. Blandford,
Executive Director

dc: WACDA Board of Directors, APICDA, BBEDC, CBSFA, CVRF, NSEDC, YDFDA

ARCTIC	CHEVAK	EKUK	GOLOVIN	KONGIGANAK	MEKORYUK	NEWTOK	PILOT POINT	SCAMMON BAY	STEBBINS	TWIN HILLS
ATMAUTLUAK	CLARKS POINT	EKWOK	GOODNEWS BAY	KOTLIK	MOUNTAIN VILLAGE	NIGHTMUTE	PLATINUM	SHAKTOOLIK	TELLER	UGASHIK
ATMAUTLUAK	DILLINGHAM	ELIM	GRAYLING	KOYUK	NAKNEK	NIKOLSKI	PORT HEIDEN	SOUTH NAKNEK	TOGIAK	UNALAKLEET
ATKA	DIOMEDE	EMMONAK	HOOPER BAY	KWIGILLINGOK	NAPAKIAK	NOME	PORTAGE CREEK	ST. GEORGE	TOKSOOK BAY	WALES
BREVIG MISSION	EEK	FALSE PASS	KING SALMON	LEVELOCK	NAPASKIAK	NUNAM IQUA	QUINHAGAK	ST. MICHAEL	TUNTUTULIAK	WHITE MOUNTAIN
CHEFORNAK	EGEGIK	GAMBELL	KIPNUK	MANOKOTAK	NELSON LAGOON	OSCARVILLE	SAVOONGA	ST. PAUL ISLAND	TUNUNAK	



Alaska Trollers Association
130 Seward #205
Juneau, AK 99801
(907) 586-9400 phone
(907) 586-4473 fax
ata@gci.net

March 19, 2011

Representative Steve Thompson, Chairman
Representative Craig Johnson, Vice Chairman
House Fisheries Committee
Alaska State Legislature
Juneau, AK 99811

Dear Representatives Thompson, Johnson, and Committee Members:

The Alaska Trollers Association supports the re-appointment of Mel Morris to the Alaska Board of Fisheries.

Mr. Morris approaches fisheries from both the biology and processing aspects. He is familiar with Alaskan harvesting methods and recognizes well the importance of balancing the structure of our fisheries to maintain sustainability, quality, and jobs in coastal communities.

Mr. Morris is worthy of another term and is precisely the kind of person ATA looks for when searching out candidates for the Board of Fisheries. Mel is knowledgeable, reasonable, and has an excellent rapport with the fishing public. The fact that he is seasoned in the board process makes him extremely valuable to the state's interests.
We urge you to support his re-appointment.

Best Regards,

Dale Kelley

Executive Director

Smith, Michael
Board of Fisheries

BIOGRAPHY FOR
MICHAEL E. SMITH

Recent Employment
Director, Subsistence Resources 2002-Present
Tanana Chiefs Conference
122 1st Avenue, Ste 600
Fairbanks, Alaska 99701
(907)452-8251 Ext. 3256

Past Employment

Morton & Pitalo	Planner	1998-02
Self-employed Builder/Fisherman/Handyman		1994-98
Legislative Affairs Agency	Senator's Hoffman/Binkley Representative Wallis	1989-1994
Tanana Chiefs Conference	Local Government Specialist	1985-1989

Relevant Fishing Experience
Subsistence and commercial fishing-Yukon River
Advisor -Yukon River Panel US/Canada Treaty Panel
Member- Joint Technical Committee/Yukon River Panel (JTC)
Member-Arctic Yukon Kuskokwim Sustainable Salmon Initiative (AYKSSI)
Member-Western Arctic Salmon Stock Identification Program (WASSIP)
Member-North Pacific Fisheries Management Council
"Bering Seas Bycatch Working Group"
Member-AYK Escapement Goal Review Committee

Other Board Activity
Board of Game- Tier II Subsistence Review Committee
Member-Alaska Migratory Bird Co-Management Council
Former Board Member/President-Alaska Legal Services Corp.
Former Board Member-Habitat for Humanity/Fairbanks
Former Board Member-Fairbanks Community Health Corporation

Brown, Benjamin
Alaska Commerical Fisheries Entry Commission

Benjamin Brown

Employment

Baxter Bruce & Sullivan P.C. — associate attorney
Juneau, Alaska — April 2007 – present

Choate Law Firm LLC — associate attorney
Juneau, Alaska — September 2006 – March 2007

The Juneau Empire — columnist
Juneau, Alaska — October 2003 – present

Alaska Department of Environmental Conservation — legislative liaison
Juneau & Anchorage, Alaska — January – November 2005

Lisa Murkowski for US Senate — research director/regional co-ordinator
Juneau & Anchorage, Alaska — November 2003 – November 2004

Alaska State Chamber of Commerce — legislative lobbyist
Juneau, Alaska — legislative session 2003

Alaska Department of Revenue — administrative hearing officer
Juneau, Alaska — September – December 2002

The Hon. Larry Weeks, Presiding Judge — law clerk
1st Judicial District, Alaska Court System — August 2001 – August 2002
Juneau, Alaska

The Hon. Mark Green — legal intern
Public Advocate for the City of New York — March – May 2001
New York, N.Y.

Gilmore & Doherty — legal intern
Anchorage, Alaska — September – November 2000

Alaska Office of Public Advocacy, Defense Section — legal intern
Anchorage, Alaska — March – May 2000

The Hon. Ted Stevens — legal intern/legislative assistant
US Senator for Alaska — September – November 1999
Washington, D.C.

The Alaska Legislature — legislative aide
Juneau & Anchorage, Alaska — 1991 – 1998

The Anchorage Press — columnist
Juneau & Anchorage, Alaska — 1997 & 1998

Education

Northeastern University — J.D.
School of Law — 2001
Boston, Massachusetts

Georgetown University School of Foreign Service Washington, D.C.	B.S.F.S. 1992
Palmer High School Palmer, Alaska	Diploma 1985

Professional associations

The Alaska Bar Association	April 2002 – present
The Juneau Bar Association	April 2002 – present president, vice-president/treasurer, secretary
The New York State Bar	passed July 2002 examination

Other activities

Alaska Humanities Forum	treasurer, board of directors
Alaska Moving Image Preservation Association	board of directors
Alaska State Council of the Arts	chairman, grant review panelist
American Red Cross, Southeast Alaska	development committee
Anchorage Sister Cities Commission	public relations, commissioner
CoastAlaska	vice-chairman, secretary, board of directors finance committee, corporate documents committee
Friends of the Alaska State Museum	1st vice-president, board of directors
Juneau Arts & Humanities Council	board of trustees, concert committee
KTOO-FM&TV	chairman, board of directors, finance committee DJ, theatre critic, auctioneer
the theatre	theatrical résumé available as requested

UNITED FISHERMEN OF ALASKA

211 Fourth Street, Suite 110
Juneau, Alaska 99801-1172
(907) 586-2820
(907) 463-2545 Fax
E-Mail: ufa@ufa-fish.org
www.ufa-fish.org

March 21, 2011

Representative Steve Thompson, Chairman
House Special Committee on Fisheries
Alaska State Legislature
State Capitol, 120 Fourth Street
Juneau, AK 99801-1182

RE: Support for Confirmation of Ben Brown for Commercial Fishery Entry Commissioner

Dear Representative Thompson and Committee members:

United Fishermen of Alaska (UFA) represents 38 Alaska commercial fishing organizations from fisheries throughout Alaska and the federal waters off our shores. UFA supports the confirmation of Ben Brown for Commercial Fishery Entry Commissioner.

The Commercial Fishery Entry Commission (CFEC) administers permitting for commercial fisheries, involving complex issues based on statute, regulation, and interpretation of historical court cases. This permitting is a cornerstone of stability that is a primary key to the sustainability of Alaska's fisheries, and essential to ensuring that our fisheries provide maximum benefits to Alaskans.

We feel Mr. Brown's background as a legislative aide and experience in the legal profession provide the qualifications for this position. We support the approval of Ben Brown's appointment by the House Special Committee on Fisheries and by the Alaska State Legislature.

Thank you for your consideration.

Sincerely,

Mark D. Vinsel

Mark Vinsel
Executive Director

Confir-
mations
2012

<TARGET><BILL></BILL><SUBJECT>Confirmations
2012</SUBJECT><COMM>HFSH27</COMM></TARGET>

Alaska State Legislature

House of Representatives

Office of the Chief Clerk

Official Business

State Capitol
Juneau, AK 99801-1182
Phone: (907) 465-3725
Fax: (907) 465-5334

MEMORANDUM

TO: Representative Thompson, Chair
House Special Committee on Fisheries

FROM: Suzi Lowell, Chief Clerk

DATE: February 3, 2012

SUBJECT: Governor's Appointment(s)

The Speaker referred the following Governor's appointment(s) to the House Special Committee on Fisheries and the Resources Committee:

Fishermen's Fund Advisory and Appeals Council

Clay Bezenek – Ketchikan
Appointed: 12/26/2007
Reappointed: 3/1/2012 Term Expires: 3/1/2017

James Herbert – Seward
Appointed: 9/19/1997
Reappointed: 1/31/2001 Reappointed: 3/8/2006
Reappointed: 5/17/2011 Term Expires: 3/1/2016

The Referral for Confirmation page(s) and signature page(s) are attached for your use. The resume(s) and contact information will be sent electronically.

Attachments as noted

Alaska State Legislature

House of Representatives

Office of the Chief Clerk

Official Business

State Capitol
Juneau, AK 99801-1182
Phone: (907) 465-3725
Fax: (907) 465-5334

MEMORANDUM

TO: All Committees

FROM: Suzi Lowell, Chief Clerk

DATE: 2012

SUBJECT: Confirmation Committee Report (Signature Page) for Governor's Appointments

The attached Confirmation Committee Report (signature page) should be used in conjunction with the Referral for Confirmation form for the Governor's appointments to boards and commissions requiring legislative confirmation. After a committee has reviewed the qualifications of the appointee(s), the Referral for Confirmation form(s) should be dated and attached to a signature page. Have members sign the signature page and return the confirmation packet to the Chief Clerk's office.

Please use a single signature page for multiple appointees if the names of all members signing the report are the same for each attached referral. This allows members to sign once for multiple appointments.

Attached are several signature pages for your use. We used colored paper to make them easier to identify. If you anticipate needing more forms or need assistance, please call Nancy McMullen at 465-6809.

Note: A separate report, including the signatures, will be used for department commissioners.

Attachments

Alaska State Legislature

Official Business

House of Representatives

Office of the Chief Clerk

Thomas B. Stewart Legislative
Office Building, Room 202
Juneau, AK 99801-1182
Phone: (907) 465-3725
Fax: (907) 465-5334

REFERRAL FOR CONFIRMATION

Date Referred: February 3, 2012

Committee: **House Special Committee on Fisheries**

Fishermen's Fund Advisory and Appeals Council
Clay Bezenek – Ketchikan
Appointed: 12/26/2007
Reappointed: 3/1/2012 Term Expires: 3/1/2017

Action Date: 2/28/12
(Same date as on the accompanying signature page)

Note: Attach to a signature page and return to the Chief Clerk's office.

Alaska State Legislature

Official Business

House of Representatives

Office of the Chief Clerk

Thomas B. Stewart Legislative
Office Building, Room 202
Juneau, AK 99801-1182
Phone: (907) 465-3725
Fax: (907) 465-5334

REFERRAL FOR CONFIRMATION

Date Referred: February 3, 2012

Committee: **House Special Committee on Fisheries**

Fishermen's Fund Advisory and Appeals Council
James Herbert – Seward
Appointed: 9/19/1997
Reappointed: 1/31/2001 Reappointed: 3/8/2006
Reappointed: 5/17/2011 Term Expires: 3/1/2016

Action Date: 2/28/12
(Same date as on the accompanying signature page)

Note: Attach to a signature page and return to the Chief Clerk's office.

CONFIRMATION COMMITTEE REPORT

Action date: 2/28/12

The **House Special Committee on Fisheries** has reviewed the qualifications of the Governor's appointee(s) as shown on the attached Referral for Confirmation forms(s) and recommends that the name(s) be forwarded to a joint session for consideration:

This does not reflect intent by any of the members to vote for or against this individual during any further sessions for the purposes of confirmation.

Signature:	Printed Last Name
	PRUITT
	HERRON
	AUSTERMAN
	MILLER
Chair:	THOMPSON

Please attach appointee Referral for Confirmation form(s) and return to the Chief Clerk's office.

Bezenek, Clay
Fishermen's Fund Advisory & Appeals Council

STATE OF ALASKA
OFFICE OF THE GOVERNOR
P.O. Box 110001, Juneau, AK 99811-0001
Phone: (907) 465-3500 Fax: (907) 465-3532 269-7461

BOARDS AND COMMISSIONS APPLICATION FORM

INSTRUCTIONS

A separate application is required for each position for which you apply. Complete and specific answers will aid in rapid and accurate processing of your resume. Please type or print legibly in ink. Forward to the above address. Be sure your answers are true. A willfully false answer may result in your disqualification or removal from office if you are appointed.

Board or Commission and seat for which I am applying: Fishermans Fund Board
(For example, Board of Agriculture, public seat)

Please list any other State Boards or Commissions on which you currently or previously have served:
Fish Fund Bard 08-12

Name: Clay Bezenek

Mailing Address: _____

Residence Address: _____

City, State and Zip Code: Ketchikan Ak 99901

Home or Message Telephone: ___ Business Telephone: _ . _____

Fax Number: _____ Cell Phone: _____

Email address: _____

AS 39-05-100 requires that a person appointed to a state board or commission be a registered voter prior to the last general election:

Are you a registered voter: YES X NO _____ Voter Registration Number (Optional): _____

Social Security Number (Optional, required if appointed for travel, reimbursement etc.): _____

Have you ever been convicted of a misdemeanor within the past five years or a felony within the past ten years?

YES _____ NO X if "YES", explain the circumstances on a separate sheet of paper and attach it to this application. A conviction is not necessarily grounds for disqualification. The number of convictions, nature, recentness, and relationship to the board position applied for, will be evaluated and a determination will be made after a review of all relevant facts.

CONFLICTS OF INTEREST: Certain boards and commissions require full disclosure of personal financial data under AS 39.50.010. If required for the board or commission for which you are applying, are you willing to do so?
YES X NO _____

Could you or any member of your family be affected financially by decisions to be made by the board or commission for which you have applied? YES _____ NO X

If "YES", explain:

DEC-21-2011 15:33 From: To:19072697461 Page:1/4

TRAINING AND EXPERIENCE: (If resume attached, it is not necessary to complete items A-D)

A. List any professional licenses, certifications, or registrations and dates obtained that may be used as qualifying criteria:

100 Ton masters License
AB license
Numerous endorsements

B. List both formal and informal education and training experiences: (Use additional paper if necessary).

K-12 Battle Lake Public Schools. Battle Lake, MN 1968-1980
Concordia College, Moorhead, MN 1980-82

C. List any community service, municipal government, and state positions held, and any awards received. Include both compensated and uncompensated positions (such as president of a service organization or a mayor). Include length of time serviced.

SARDFA Board of Directors 2yrs
Ketchikan Advisory Board (Fish & Game) 4yrs
First Lutheran Church Council 1yr

D. Employment work history – paid, unpaid or voluntary: (Use additional paper of necessary).

Commercial Fisherman 1983 - present

The Office of the Governor and the State of Alaska have an Affirmative Action Equal Employment Opportunity Program. To assist in the program, you are asked to voluntarily answer the following questions to provide the information necessary for reporting purposes. Under State and Federal law, the information you provide will not be used to illegally discriminate against you.

DATE OF BIRTH: _____ SEX: FEMALE _____ MALE _____

ETHNICITY:
Alaska Native ___ American Indian ___ Asian or Pacific Islander ___ Black ___ Hispanic ___ White ___

MILITARY SERVICE (if applicable, give dates): _____

CERTIFICATION: I swear the information I have entered on this form is true to the best of my knowledge. I understand that if I deliberately conceal or enter false information on the form my application may be rejected, I may be removed from the list of eligible candidates, or I may be removed from the position. I agree that the Office of the Governor may contact present or former employees or other persons who know me to obtain an additional information about my skills and abilities. I understand that the information on this application is public information and may be released through a legal request for such information.

Signature (in ink): _____ Date: 11/20/11

Please attach a current resume with your application.

DEC-21-2011 15:34 From: To:19072697461 Page:2/4

If appointed, a press release will be issued announcing your appointment pending the completion of the appointment process with the Governor's office. Please supply our office with the following information that will be included in the press release.

(Name): Clay Bazeneke (Age): ___ (Hometown): Ketchikan, Ak
is (Job title/Place of employment): Commercial Fisherman / F/V Salty
(Name) holds (Listing of earned degrees like bachelor's, master's,
ect.): 28 yr commercial fisherman Fisheries from ketchikan to Nyrtle Sound
Salmon otter Herring
and dive fisheries
(Or list relevant experience to the position you are being appointed to)

Examples:

John A. Doe, 38 of Soldotna, is Director of T-Shirts & Co. Doe holds a bachelor's degree in business administration from X University and a master's degree in communications from X University.

John A. Doe, 38 of Palmer, is the owner and operator of Doe and Associates, Inc. Doe previously served as division manager at X, Inc. Doe is a certified personnel consultant.

DEC-21-2011 15:34 From: To:19072697461 Page:3/4

STATE OF ALASKA
OFFICE OF THE GOVERNOR

BOARDS AND COMMISSIONS

Name: Carl Clay Brunck Date: 12/20/11

(Indicate top three boards/commissions of interest by number with #1 as your preference)

	Accounting Board
	Aerospace Development Corporation
	Aging Commission
	Agriculture & Conservation
	Alaska Juvenile Justice Advisory Committee
	Alaska Retirement Management Board
	Alaska Statehood Celebration Commission
	Alaska-Alberta Bilateral Council
	Alcohol/Drug Abuse
	Alcoholic Beverage Control
	Architects/Engineers/ Land Surveyors
	Arts Council
	Assessment Review Board
	Aviation Advisory Board
	Bald Eagle Preserve
	Bar Association
	Barbers & Hairdressers
	Bering Sea Fishery Advisory Board
	Big Game Commercial Services
	Boating Safety Council
	Broadcasting Commission
	Children's Trust Board
	Chiropractic Examiners
	Clemency Advisory Committee
	Commemorative Coin Commission
	Commercial Fisheries Entry
	Commercial Fishing/ Agriculture Bank
	Community Service Commission
	Denali Access System Advisory Committee
	Dental Examiners
	Disabilities/Special Education
	Domestic Violence/Sexual Assault
	Education & Early Development
	Education Commission/States
	Emergency Medical Services
	Emergency Response Commission
	Employment of People with Disabilities
	Exxon Valdez Oil Spill Trustee
	Faith-Based & Community Initiatives Council
	Fire Standards Council
	Fisheries

X	Fishermen's Fund Advisory & Appeals
	Forestry
	Game
	Health Council
	Historical Commission
	Historical Records Advisory
	Homeless Council
	Housing Finance Corporation
	Human Rights
	Humanities Forum
	Independent Living Council
	Industrial Development/Export Authority
	Interstate Oil & Gas Compact
	Judicial Conduct
	Judicial Council
	Knik Arm Bridge
	Labor Relations Agency
	Libraries Advisory
	Local Boundary Commission
	Marine Pilots
	Marine Transportation Advisory Board
	Marital & Family Therapy
	Medical Board
	Mental Health Board
	Mental Health Trust Authority
	Midwives
	Minerals Commission
	Municipal Bond Bank
	Natural Gas Authority
	Natural Gas Pipeline Corporation
	Natural Resources Conservation Dev
	North Pacific Anadromous Fish
	North Pacific Fisheries Management Council
	North Pacific Research Board
	Nursing
	Occupational Safety
	Oil & Gas Conservation Commission
	Optometry
	Pacific Marine Fisheries Commission
	Pacific Salmon Commission-Commissioners
	Pacific Salmon Commission- Northern Panel

	Pacific Salmon Commission-Transboundary Panel
	Parole Board
	Permanent Fund
	Pharmacy Board
	Physical/Occupational Therapy
	Pioneer's Home Advisory
	Police Standards Council
	Postsecondary Education
	Professional Counselors
	Professional Teaching Practices
	Psychologist/ Psychological assoc.
	Public Offices Commission
	PWS Oil Spill Recovery Institute
	Railroad Corporation
	Real Estate Appraisers
	Real Estate Commission
	Regents
	Regulatory Commission (RCA)
	Royalty Oil & Gas Development
	Safety Advisory Council
	Seafood Marketing Institute
	Seismic Hazards Safety Commission
	Social Work Examiners
	Student Loan Corporation
	Subsistence Resource Commissions
	Suicide Prevention Council
	Telecommunications
	Uniform State Laws
	Veterans Advisory Council
	Veterinary Examiners
	Violent Crimes Compensation
	Water and Wastewater Works
	Western Interstate Comm./Higher Educ
	Wood-Tikchik State Park
	Worker's compensation
	Worker's Compensation Appeals Commission
	Workforce Investment Board
	Yukon River Panel

DEC-21-2011 15:35 From: To:19072697461 Page:4/4

Herbert, James
Fishermen's Fund Advisory &
Appeals Council

BOARDS/Fishmens Fund Ad./038
ENTERED
1-12-06
dc

OFFICE OF THE GOVERNOR
MAILROOM
JAN 12 2006

Jim Herbert

Seward, AK 99664

January 6, 2006

Boards and Commissions
Office of the Governor
P.O. Box 110001
Juneau, AK 99811-0001

Dear Madam or Sir:

Please accept my application for reappointment to the Fisherman's Fund Advisory and Appeals Council. My current term expires at the end of this month. I understand that if no new person is appointed I will continue serving until such time as the Governor makes a decision.

I have submitted the standard application and attached a resume. As a serving member of the Fisherman's Council, I feel I can offer corporate knowledge and general experience in coping with individual appeals. The financial health of the Fund has always been of great importance to me and I feel I can provide solid advice and perspective on fiduciary matters.

Please contact me if you need more information or if I should submit other forms or letters.

Sincerely yours,

Jim Herbert

Jim Herbert

STATE OF ALASKA
OFFICE OF THE GOVERNOR
P.O. Box 110001, Juneau, AK 99811-0001
Phone: (907) 465-3500 Fax: (907) 465-3532

BOARDS AND COMMISSIONS APPLICATION FORM

INSTRUCTIONS

A separate application is required for each position for which you apply. Complete and specific answers will aid in rapid and accurate processing of your resume. Please type or print legibly in ink. Forward to the above address. Be sure your answers are true. A willfully false answer may result in your disqualification or removal from office if you are appointed.

Board or Commission and seat for which I am applying: Fisherman's Fund Advisory & Appeals Council
(For example, Board of Agriculture, public seat)

Please list any other State Boards or Commissions on which you currently or previously have served:
NONE

Name: James Herbert

Mailing Address: _____

Residence Address: _____

City, State and Zip Code: _____

Home or Message Telephone: _____ Business Telephone: _____

Fax Number: _____ Cell Phone: _____

Email address: _____

AS 39-05-100 requires that a person appointed to a state board or commission be a registered voter prior to the last general election:

Are you a registered voter: YES ✓ NO _____ Voter Registration Number (Optional): _____

Social Security Number (Optional, required if appointed for travel, reimbursement etc.): on file.

Have you ever been convicted of a misdemeanor within the past five years or a felony within the past ten years?

YES _____ NO X if "YES", explain the circumstances on a separate sheet of paper and attach it to this application. A conviction is not necessarily grounds for disqualification. The number of convictions, nature, recentness, and relationship to the board position applied for, will be evaluated and a determination will be made after a review of all relevant facts.

CONFLICTS OF INTEREST: Certain boards and commissions require full disclosure of personal financial data under AS 39.50.010. If required for the board or commission for which you are applying, are you willing to do so?
YES X NO _____

Could you or any member of your family be affected financially by decisions to be made by the board or commission for which you have applied? YES _____ NO X

If "YES", explain:

TRAINING AND EXPERIENCE: (If resume attached, it is not necessary to complete items A-D)

A. List any professional licenses, certifications, or registrations and dates obtained that may be used as qualifying criteria:

please see resume

B. List both formal and informal education and training experiences: (Use additional paper if necessary).

C. List any community service, municipal government, and state positions held, and any awards received. Include both compensated and uncompensated positions (such as president of a service organization or a mayor). Include length of time serviced.

D. Employment work history – paid, unpaid or voluntary: (Use additional paper of necessary).

The Office of the Governor and the State of Alaska have an Affirmative Action Equal Employment Opportunity Program. To assist in the program, you are asked to voluntarily answer the following questions to provide the information necessary for reporting purposes. Under State and Federal law, the information you provide will no be used to illegally discriminate against you.

DATE OF BIRTH: _ / / SEX: FEMALE _____ MALE _____

ETHNICITY:
Alaska Native ___ American Indian ___ Asian or Pacific Islander ___ Black ___ Hispanic ___ Whit ___

MILITARY SERVICE (if applicable, give dates): _____

CERTIFICATION: I swear the information I have entered on this form is true to the best of my knowledge. I understand that if I deliberately conceal or enter false information on the form my application may be rejected, I may be removed from the list of eligible candidates, or I may be removed from the position. I agree that the Office of the Governor may contact present or former employees or other persons who know me to obtain an additional information about my skills and abilities. I understand that the information on this application is public information and may be released through a legal request for such information.

Signature (in ink): James Herbert Date: January 6, 2006

Please attach a current resume with your application.

RESUME

JAMES W. HERBERT
Seward, Alaska 99664

EDUCATION:

Mount Vernon High School, Mount Vernon, New York
September 1961 – June 1965
Regents Diploma
University of Wisconsin, Madison, WI
September 1965 -June 1969
Bachelor of Arts, Major in Zoology
University of Oregon, Eugene, OR
January 1975 - December 1976
Master of Arts, Marine Biology
Oregon State University, Marine Science Center,
Newport, OR, Spring 1975

LICENSES AND CERTIFICATES:

U.S. Coast Guard Merchant Marine License (#774244)
Master - 1600 GT Oceans
Unlimited Radar Observer Endorsement
Marine Fire Fighting School - Delgado Community College
STCW Certificate – BST, PSC, ARPA, BRM, RFPNW
Merchant Mariner Document - Able Seaman - Unlimited
Instructor - Trainer Alaska Marine Safety Education Association.
Emergency Medical Technician I
National Cargo Bureau Fishing Vessel Stability Certificate.
Commercial Driver's License - Class B and Passengers

EXPERIENCE:

September 2001 – present: Owner/operator F/V CAPTAIN COOK, 48 foot fiberglass fishing and research vessel. Commercial fishing and charter operations in South Central Alaska.

June 1995 - present: Skipper or Mate of MARITIME MAID, 86 foot research vessel operating in the Gulf of Alaska and Southeast Alaska. Oversight of a crew of four and up to 15 researchers conducting biological research.

December 1987 – May 2004: Maritime Department Head/Instructor at Alaska Vocational Technical Center, Seward, AK. Teaching marine related classes including Net Repair, Electronic Fish Finding, Radar, Loran, GPS, Trawling Technology, Commercial Fishing Methods, Safety and Survival, First Aid, CPR, and Vessel Operator Training. Development of a large number of USCG approved courses. Community Development Quota training outreach.

April 1988 - June 1996: Owner/operator of NORTHERN LIGHT, a 43-foot steel fishing vessel. Primary focus is long line fishing and salmon seining in Kodiak Island waters. Providing a learning and job opportunity for four individuals.

January 1979 - June 1987: Owner/operator of the 48 foot steel combination vessel CAPE CHACON. Responsibilities included the safe, efficient, and profitable operation of vessel targeting on salmon, scallops, shrimp, halibut, ground fish, Dungeness, tanner, and king crab. Also salmon research charters for the Alaska Department of Fish and Game. Waters of Southeast Alaska to Kodiak Island.

January - May 1981: Instructor Marine Program, Prince William Sound Community College, Valdez, AK. Teaching a wide variety of courses relevant to commercial fishing including Seamanship, Hydraulics, Diesel Mechanics, Trawling, Long Lining, Pot Fishing, Net Construction and Repair.

ORGANIZATIONS:

US Coast Guard Commercial Fishing Industry Vessel Advisory Committee
1989 - 1992, 1995- 2005.
Chairman 1998 - 2005

Alaska Marine Safety Education Association
Board of Directors 1990 – present.
Chairman 1999 – present

Alaska Fisherman's Fund Advisory and Appeals Council
1997 – present

United Fishermen of Alaska
1985 - present

North Pacific Fisherman's Association
Member 1980 - present
Board of Directors 1986 - 1993

Homer Fish and Game Advisory Committee
Member - 1979 - 1991
Chairman - 1985 – 1989

Alaska State Legislature

Official Business

House of Representatives

Office of the Chief Clerk

State Capitol
Juneau, AK 99801-1182
Phone: (907) 465-3725
Fax: (907) 465-5334

REFERRAL FOR CONFIRMATION

Date Referred: April 2, 2012

Committee: **House Special Committee on Fisheries**

Board of Fisheries
Orville Huntington – Huslia
Appointed: 7/1/2012 Term Expires: 6/30/2015

Action Date: 4/5/17
(Same date as on the accompanying signature page)

Note: Attach to a signature page and return to the Chief Clerk's office.

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REFERRAL FOR CONFIRMATION

Date Referred: April 2, 2012

Committee: **House Special Committee on Fisheries**

Board of Fisheries

Karl Johnstone – Anchorage
Appointed: 12/5/2008 Reappointed: 7/1/2009
Reappointed: 7/1/2012 Term Expires: 6/30/2015

Action Date: 4/5/12
(Same date as on the accompanying signature page)

Note: Attach to a signature page and return to the Chief Clerk's office.

CONFIRMATION COMMITTEE REPORT

Action date: 4/5/12

The **House Special Committee on Fisheries** has reviewed the qualifications of the Governor's appointee(s) as shown on the attached Referral for Confirmation forms(s) and recommends that the name(s) be forwarded to a joint session for consideration:

This does not reflect intent by any of the members to vote for or against this individual during any further sessions for the purposes of confirmation.

Signature:	Printed Last Name
	Kaufman
	Johnson
	Pruitt
	MILLER
Chair:	Thompson

Please attach appointee Referral for Confirmation form(s) and return to the Chief Clerk's office.

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Official Business

MEMORANDUM

TO: Representative Thompson, Chair
House Special Committee on Fisheries

FROM: Suzi Lowell, Chief Clerk

DATE: April 2, 2012

SUBJECT: Governor's Appointment(s)

The Speaker referred the following Governor's appointment(s) to the House Special Committee on Fisheries:

Board of Fisheries

Orville Huntington – Huslia
Appointed: 7/1/2012 Term Expires: 6/30/2015

Karl Johnstone – Anchorage
Appointed: 12/5/2008 Reappointed: 7/1/2009
Reappointed: 7/1/2012 Term Expires: 6/30/2015

The Referral for Confirmation page(s) and signature page(s) are attached for your use. The resume(s) and contact information will be sent electronically.

Attachments as noted

Huntington, Orville
Board of Fisheries

Orville Huntington
Huslia, AK 99746

Orville Huntington was born in Huslia, Alaska and received a B.S. in Wildlife Biology from University of Alaska, Fairbanks. Mr. Huntington is dedicated to working closely with young people to promote the values of traditional Native elders combined with contemporary western knowledge. He is committed to protecting the aboriginal rights of Native people to continue to live a subsistence way of life and preserve the cultural beliefs associated with that way of life as it is consistent with State and Federal law. His primary responsibilities continue to be the preservation of Native subsistence hunting, fishing, gathering and trapping opportunities and the cultural events that surround those beliefs, and as a public servant for the village of Huslia and the 43 villages of the Tanana Chiefs Conference region.

Mr. Huntington currently works as the Wildlife and Parks Director for the Tanana Chiefs Conference. Prior to that, he served for 14 years as a Refuge Information Technician at the Koyukuk/Nowitna NWR Complex and U.S. Fish and Wildlife Service. As a scientist he worked closely with local village people in the villages of Kaltag, Nulato, Koyukuk, Galena, Ruby, Huslia and Hughes on subsistence surveys.

Previous employment:

- Seasonal labor, Bureau of Land Management (Emergency Fire Fighter)
- Fisherman
- Laborer's and Carpenter's Union
- Huslia Tribal Council (Tribal Operations Specialist)
- Tribal and City Council member

Affiliations:

- Alaska Federation of Natives board of directors (interior village representative)
- K'oyitl'ots'ina Ltd. Board of Directors (Treasurer) for the villages of Huslia, Hughes, Allakaket and Alatna
- Brooks Range Contracting Board of Directors
- Koyukuk Moose Hunter's Working Group
- Interior Regional Housing Authority Board of Commissioners
- Interior Athabascan Tribal College Board of Trustees
- Alaska Native Science Commission Board of Commissioners



Johnstone, Karl S.
Board of Fisheries

Resume

Name:	Karl S. Johnstone
Address:	Anchorage, Alaska 99516
Time in Alaska:	1967 to present
Date of Birth:	
Health:	Perfect
Education:	Bachelor's degree in Business, 1964 U. of Arizona Juris Doctor in Law, 1967 U. of Arizona
Work Experience:	Private Practice of Law 1968 through 1978 Superior Court Judge 1979 through July 1996 Part time mediator/arbitrator and limited practice 1997 through present
Position applying for:	Member of North Pacific Fishery Management Council or Alaska Fish Board
Related Experience:	Owned and fished Limited entry permits for set net and drift net salmon fishing in Bristol Bay from 1984 through 1988. Owned and fished Limited entry permits for gillnet herring in S.E. Alaska and Prince William Sound from 1984 through 1988. Have been an active sport fisherman through out Alaska since 1967 to present.
Other activities:	Golf, flying, building aircraft, fishing, reading.
References:	Jim Palin Doug Baily Landa Baily
Contact information:	

Employment Applicant Profile

Personal Information

First Name: karl Middle Initial: (Optional) Last Name: johnstone

Social Security Number:

Mailing Address:

City: anch State: ak Zip Code: 99516 Country: U.S.

Home Phone: *Area Code first

Work/Message Phone: *Area Code first

Email: (Optional)

Are you currently an Alaska Resident? yes Yes No

Do you have a legal right to accept employment in the United States? yes Yes No

Are you related to any person currently working for the State of Alaska? Yes no No

If Yes, please list their name(s), their Departments(s), and your relationship(s):

Have you ever been convicted of a felony? Yes no No
Have you been convicted of a misdemeanor within the past five years? Yes no No

If you answered Yes to either of the above questions, please explain below:

Note: If you have been convicted of a felony, you will be required to provide a copy of your judgment if chosen for an interview.

Education & Training
Education: Check highest level attained

High School
- Some High School
- HS Graduate or GED

Post Secondary
- Some College
- Associate's Degree
- Bachelor's Degree
- Master's Degree

J.D. Doctorate

School Name U. of Arizona
School Location Tucson, Ariz.
Areas of Study Law
Degrees obtained J.D.

School Name
School Location
Areas of Study
Degrees obtained

School Name
School Location
Areas of Study
Degrees obtained

School Name
School Location
Areas of Study
Degrees obtained

Certifications, licenses and date obtained.
Inactive member of Ariz. and Ak. Bar Associations

Career-specific, job-related training and skills.
Legal

Experience:
Work History: List up to four employers.
Name of employer and location: Self mployed as a lawyer
Start Date:
(Month/Day/Year) march, 1968
Ending Date:
(Month/Day/Year) Nov, 1979
Job Title:
Supervisor's Name:
Supervisor's Phone
Number:
Employment Type: Full-Time Part-Time
Hours/Week worked:
Salary: (Monthly)
Description. Please describe your duties.
practice of law in business and labor fields

Name of employer and location: Stat of Alaska
Start Date:
(Month/Day/Year) Nov 1978
Ending Date:
(Month/Day/Year) July 25, 1996
Job Title: superior court judge
Supervisor's Name:
Supervisor's Phone
Number:

Employment Type: Full-Time Part-Time
Hours/Week worked:
Salary: (Monthly)
Description. Please describe your duties.

Name of employer and location:
Start Date:
(Month/Day/Year)
Ending Date:
(Month/Day/Year)
Job Title:
Supervisor's Name:
Supervisor's Phone
Number:
Employment Type: Full-Time Part-Time
Hours/Week worked:
Salary: (Monthly)
Description. Please describe your duties.

Name of employer and location:
Start Date:
(Month/Day/Year)
Ending Date:
(Month/Day/Year)

Job Title:
Supervisor's Name:
Supervisor's Phone
Number:
Employment Type: Full-Time Part-Time
Hours/Week worked:
Salary: (Monthly)
Description. Please describe your duties.

Veterans'/National Guard Preference
Are you a veteran or a member of the Alaska National Guard? If no, you may proceed to the Optional State of Alaska Equal Employment Opportunity Questionnaire below.

Are you a veteran who served on active duty (not active duty for training) in the United States Armed Forces and did you receive an honorable or general discharge? Yes No

If Yes:

Did you serve during a war* OR during the period beginning April 28, 1952, and ending July 1, 1955? OR

Did you serve for more than 180 consecutive days, any part of which occurred during the following periods:

- After November 11, 1918, and before December 2, 1919;
- After September 15, 1940, and before December 7, a941;
- After December 31, 1946, and before January 1, 1948;
- After June 26, 1950, and before April 18, 1952;
- After January 31, 1955, and before October 15, 1976; or
- In the Alaska Territorial Guard?

Did you serve during the Gulf War period beginning August 2, 1990, and ending January 2, 1992? AND If you originally enlisted after September 7, 1980, or entered on active duty on or after October 14, 1982, without having previously completed 24 months of continuos active duty, did you serve continuously for 24 months or the full period called or ordered to active duty? OR

Were you awarded a campaign or expedition medal or an award or decoration for heroism or gallantry in action? AND if you originally enlisted after September 7, 1980, or entered on active duty on or after October 14, 1982, without having previously completed 24 months of continuous active duty, did you serve continuously for more than 180 days or the full period called or ordered to active duty?

Yes No

OR

Are you currently a member of the Alaska National Guard and have you served for eight (8) years or longer? Yes No

*Under Title 5 Section 2108 of the United States Code the following time periods are considered periods of war.

- World War I Between April 6, 1917, and November 11, 1918, inclusive Unless service was with the United States military forces in Russia, then the ending date is April 1, 1920. Service after November 11, 1918, and before July 2, 1921, is considered World War I service if time was served in the active military, naval, or air service after April 5, 1917, and before November 12, 1918.
- World War II: Between December 7, 1941, and December 31, 1946. If in service on December 31, 1946, continuous service before July 26, 1947, is also considered World War II service.

Are you entitled to disability compensation, disability retirement benefits, or disability pension under laws administered by the United States Department of Veterans Affairs or a military department? OR

Were you honorably discharged and awarded the Purple Heart? Yes No

The State of Alaska complies with Title I of the Americans with Disabilities Act (ADA). Individuals with disabilities who require special accommodation, auxiliary aides or services, or alternative communication formats call 465-3897 in Juneau or (907) 465-3514 TTY.

We are an equal opportunity employer and support workplace diversity.

Please read carefully before submitting this profile: I certify the information I have entered on this form is true to the best of my knowledge. I understand if I conceal or enter false information this form, my name may be removed from consideration for a job, or I may be removed from my job, if hired. I understand the information in this profile may be released in an authorized legal investigation; and before I am hired I will be required to sign an official State Form certifying these statements are true. I agree that the State of Alaska, or its agents, may contact current or former employers or other persons who know me in order to obtain additional information.

Applicant's Signature: Karl J Schatz

Jane Pierson

From: Nancy McMullen
Sent: Monday, April 02, 2012 5:57 PM
To: 'Jane_Pierson@legis.state.ak.us'
Cc: Nancy McMullen
Subject: Bds & Comm Resumes/Contact Info
Attachments: Fisheries - Huntington #3.pdf; Fisheries - Johnstone #3.pdf

Jane,

The appointee resume(s) and contact information are attached to this email.

The Boards and Commissions Office has redacted the contact information from the resumes and has requested that it be used strictly for the purpose of contacting appointees to schedule hearings. Please do not distribute this information or post it on BASIS or other web pages.

If there is a problem with any of the contact information or if you have any other questions, please contact me.

Board of Fisheries

Karl Johnstone – Anchorage –
johnstone@alaska.net
W: 928-5411378
C: 928-379-2472

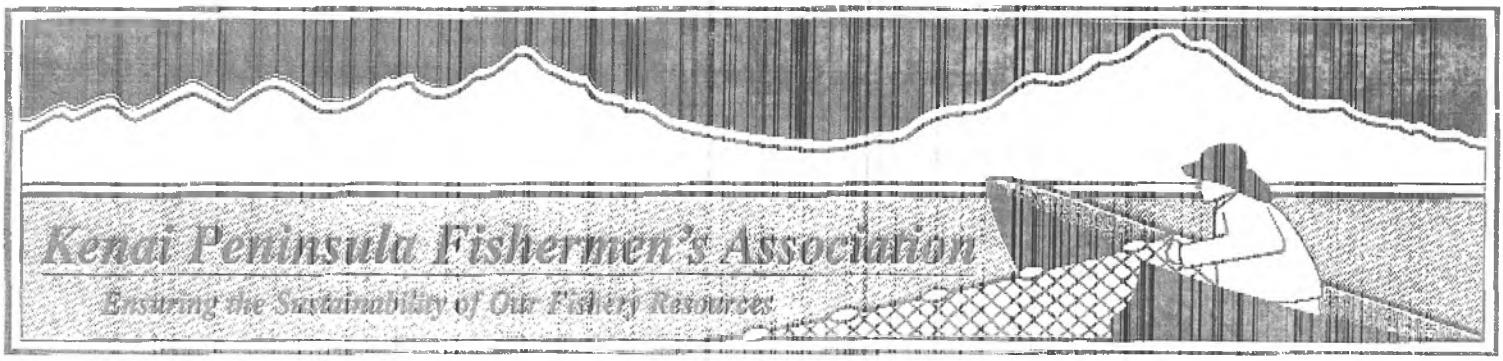
TC 4/2/12 Re: 5:00pm confirm 4/5.

Orville Huntington – Huslia TC 4/2/12 Re: 5:00pm confirm 4/5 –
orville.huntington@tananachiefs.org
C: 907-687-6788

Nancy

Nancy McMullen
Assistant Chief Clerk
Alaska House of Representatives
907-465-6809
907-465-5334 fax

e-mail on WED.



43961 Kalifornsky Beach Road • Suite F • Soldotna, Alaska 99669-8276
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April 9, 2012

Mr. Chairman,
Members of the Senate Resource committee;

For the record, my name is Paul A. Shadura II; I am a resident of Soldotna, Alaska. Today I am commenting on the re-appointment of Board of Fisheries (BOF) member Karl Johnstone, as a director of the Kenai Peninsula Fishermen's Association (KPFA).

There are approximately 745 limited entry salmon setnet permit holders who have the potential to harvest salmon within the waters of Cook Inlet (CI). Many of these independent self employed small businesses operate as co-operatives; family units who by the Commercial Fishing Entry Commission (CFEC) records are over 83% Alaskan residents.

KPFA is a 501 (c) (6), a non-profit organization that was formed in 1954. We represent family businesses from the shores of Kachemak Bay, to the Susitna Flats, from the west side of CI to the eastside beaches of the Kenai Peninsula. We are the largest setnet representation group within our waters. Our mission, "Ensuring the sustainability of our fishery resources".

It is our desire that that the Governor and the legislature continue to further strive for even representation for all stakeholders. Alaska has approximately 6640 miles of coastline, and that does not include the inland waterways and lakes. We ardently believe that regulations promulgated by the BOF create policies that affect the lives of every resident within State.

Clearly, it is the combined duty of the Department and the BOF to assess the difference in yields from implementing an OEG over an SEG or BEG. The question is how far away from Maximum Sustained Yield (MSY) is the Board willing to accept and does the board understand that "yield" is directly related to harvestable surpluses.

Without these surpluses there is a diminished expectation for a "reasonable opportunity" for the commercial fishing industry; a direct correlation between maintaining the economic strength of the local commercial fishing industry and maintaining a stable diverse community.

KPFA strongly suggests that the Board members each state clearly their reasons for denying or limiting the "fair and reasonable opportunity" of one group over another. The public has a right to know how each Board member decides how to weigh the interests of one user group over another user group. The public deserves to understand how the individual Board member reasons their decision to deny or diminish access to the resource of one resident over another. The public has a right to hear in a public meeting the decision making process in an honest and open forum.

We appreciate the complex issues that the Board members are tasked to make decision on a continuous basis.

At the last CI regulatory meeting, March 2011, a decision was made that I personally found to be "lacking" in the Board's duty to be "fair and reasonable". I approached Board member Johnstone and expressed my confusion of the "lack of process". I commented, "But you are a judge". Mr. Johnstone turned and walked away, stopped and came back to me to say, "I'm not a judge anymore". Now I did not and still do not know what that meant?

It is my understanding that the Board was created by the legislature with the assistance of the Administration; for the conservation and development of the fishery resources; with a view of providing diversity of interest and points of view. We would hope that this quasi-judicial board will consider the fairness of their decisions and provide to the public rules that are not considered "arbitrary, capricious or an abusive discretion of power".

KPFA believe that diversity of interests is important and appropriate. In this limited context we can understand Karl Johnstone's approach. We do question the Governor on having an over emphasis of representation in one area of the State when so many other areas and stakeholders lack a voice. Our position, as it was three years ago, remains neutral for this re-appointment based on this question of "over representation".

Thank you,

Paul A. Shadura II

For the Kenai Peninsular Fishermen's Association / Board of Directors

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(907) 262-2492 • Fax: (907) 262-2898 • E Mail: kpfa@alaska.net

Kenai Peninsula Fishermen's Association
Ensuring the Sustainability of Our Fishery Resources

43961 Kalifornsky Beach Road • Suite F • Soldotna, Alaska 99669-8276
(907) 262-2492 • Fax: (907) 262-2898 • E Mail: kpfa@alaska.net

April 9, 2012

Mr. Chairman,
Members of the Senate Resource committee;

For the record, my name is Paul A. Shadura II; I am a resident of Soldotna, Alaska. Today I am commenting on the appointment to the Alaska Board of Fisheries (BOF) of Orville Huntington as a director of the Kenai Peninsula Fishermen's Association (KPFA).

Our Association would like to quote from a memorandum from Alaska Department of Law (ADOL) dated 11.09 and 02.11:

Fair and reasonable opportunity. Regulations adopted for the purposes set forth in AS **16.05.251(a)**, consistent with sustained yield and the subsistence law, must also "provide a fair and reasonable opportunity for the taking of fishery resources by personal use, sport and commercial fishermen." That requirement, however, does not prevent the Board from allocating resources among user groups. The Board may make a particular species in a particular area available to one user group without making the same species or area available to another user group. If there is any question as to whether action on a proposal could deprive a user group of a "fair and reasonable opportunity" Board members should discuss this issue and provide their reasoning as to whether the proposal would provide such opportunity.

We appreciate the Governor's direct involvement in attempting to "balance" the interests on the Alaska Board of Fisheries. We believe that the position of the Governor is more than one who just makes the choice of candidates. The Administration through the Commissioner is tasked to… "manage, protect, maintain, improve, and extend the fish, game and aquatic plant resources of the state in the interest of the economy and general well-being of the state (**16.05.020 (2)**).

Further, …the board and commissioner continue to disagree, the issue shall be certified in writing by the board and the commissioner to the Governor who shall make a decision. The decision of the Governor is final. (**16.05.270 Delegation of authority to commissioner**). Clearly, the Governor does continue to have a role in the fish and game

policies of the State and can in fact decide which regulations are beneficial for the residents of the State regardless of the position of the Board of Fisheries.

The Governor addressed the needs of the people of our State through his address in January 2012. He said, " I explained how our fisheries support families and villages across our state. And I showed how we sustainably manage our fisheries for future generations. Fishing is part of Alaska's history. It is part of Alaska's future. And we will keep it strong." We highly support the Governor in his endeavor to maintain a viable commercial fishing industry.

We also believe in science or biological management and look forward to establishing communications with Department of Fish and Game, Mr. Huntington and members of our organization. We have always believed in the term "scientifically defensible". We do not agree with managing for the "tragedy of the commons".

We support the appointment of Mr. Huntington and the new diversity that he brings to the BOF process.

Thank you,

Paul A. Shadura II

The Kenai Peninsula Fishermen's Association / Board of Director's

43961 Kalifornsky Beach Road • Suite F • Soldotna, Alaska 99669-8276
(907) 262-2492 • Fax: (907) 262-2898 • E Mail: kpfa@alaska.net

Fisheries Resource Monitoring Plans 2000-2010

<TARGET><BILL></BILL><SUBJECT>Fisheries Resource Monitoring Plans 2000-2010</SUBJECT><COMM>HFSH27</COMM></TARGET>

2010 FISHERIES RESOURCE MONITORING PLAN



January 25, 2010

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OVERVIEW

BACKGROUND

Since 1999, under the authority of Title VIII of ANILCA, the Federal government has assumed expanded management responsibility for subsistence fisheries on Federal public lands in Alaska. Expanded subsistence fisheries management has imposed substantial new informational needs for the Federal system. Section 812 of ANILCA directs the Departments of the Interior and Agriculture, cooperating with the State of Alaska and other Federal agencies, to undertake research on fish and wildlife and subsistence uses on Federal public lands. To increase the quantity and quality of information available for management of subsistence fisheries, the Fisheries Resource Monitoring Program (Monitoring Program) was established within the Office of Subsistence Management. The Monitoring Program was envisioned as a collaborative inter-agency, inter-disciplinary approach to enhance existing fisheries research, and effectively communicate information needed for subsistence fisheries management on Federal public lands.

Although all proposals addressing subsistence fisheries on Federal lands are given due consideration, the 2010 Request for Proposals was focused on priority information needs developed either by strategic planning efforts or by expert opinion, followed by review and comment by the Subsistence Regional Advisory Councils. The Monitoring Program is administered by region, and strategic plans sponsored by this program were developed by workgroups of fisheries managers, researchers, Federal Subsistence Regional Advisory Council members and other stakeholders for three of the six regions: Southeast, Southcentral (excluding Cook Inlet Area), and Southwest Alaska. These plans identify prioritized information needs for each major subsistence fishery and can be viewed on or downloaded from the Office of Subsistence Management's website: http://alaska.fws.gov/asm/index.cfm. Independent strategic plans were completed for the Yukon and Kuskokwim regions for salmon in 2005. For the Northern Region and the Cook Inlet Area, assessments of priority information needs were developed from the expert opinions of the Regional Advisory Councils, the Technical Review Committee, Federal and State managers and staff from the Office of Subsistence Management.

Cumulative effects of climate change will likely fundamentally affect subsistence fishery resources, their uses, and how they are managed. Therefore, all investigators were asked to consider examining or discussing climate change effects as part of their project. Investigators conducting long-term projects were encouraged to participate in a standardized air and water temperature monitoring program for which the Office of Subsistence Management provides calibrated temperature loggers and associated equipment, analysis and reporting services, and access to a temperature database. The Office of Subsistence Management has also specifically requested proposals that would focus on effects of climate change on subsistence fishery resources and uses, and that would describe management implications.

The mission of the Monitoring Program is to identify and provide information needed to sustain subsistence fisheries on Federal public lands, for rural Alaskans, through a multidisciplinary, collaborative program. To implement the Monitoring Program, a collaborative approach is utilized in which five Federal agencies (Fish and Wildlife Service, Bureau of Land Management, National Park Service, Bureau of Indian Affairs, and U.S. Forest Service) work with the Alaska Department of Fish and Game, Regional Advisory Councils, Alaska Native organizations, and other organizations. An interagency Technical Review Committee provides scientific evaluation of proposals and investigation plans, and makes recommendations. The Regional Advisory Councils provide review and recommendations, and public comment is invited. The Interagency Staff Committee also provides recommendations. The Federal

Subsistence Board takes into consideration recommendations and comments from the process, and approves the final monitoring plan.

PROJECT EVALUATION PROCESS

The Technical Review Committee evaluates proposals, and subsequently full investigation plans, and makes recommendations for funding. The committee is chaired by the Fisheries Division Chief of the Office of Subsistence Management, and is composed of representatives from each of the five Federal agencies and three representatives from the Alaska Department of Fish and Game. Fisheries and Anthropology staff from the Office of Subsistence Management provide support for the committee.

Four factors are used to evaluate studies:

1. **Strategic Priority**

   Proposed projects should address the following and must meet the first criteria to be eligible for Federal subsistence funding.

   Federal Jurisdiction—Issue or information needs addressed in projects must have a direct association to a subsistence fishery within a Federal conservation unit as defined in legislation, regulation and plans.

   Conservation Mandate—Risk to the conservation of species and populations that support subsistence fisheries, and risk to conservation unit purposes as defined in legislation, regulation and plans.

   Allocation Priority—Risk of failure to provide a priority to subsistence uses.

   Data Gaps—Amount of information available to support subsistence management (higher priority given where a lack of information exists).

   Role of Resource—Contribution of a species to a subsistence harvest (e.g., number of villages affected, pounds of fish harvested, miles of river) and qualitative significance (e.g., cultural value, unique seasonal role).

   Local Concern—Level of user concerns over subsistence harvests (e.g., upstream vs. downstream allocation, effects of recreational use, changes in fish abundance and population characteristics).

2. **Technical-Scientific Merit**

   The project must meet accepted standards for design, information collection, compilation, analysis, and reporting. Projects should have clear study objectives, an appropriate sampling design, correct statistical analysis, a realistic schedule and budget, and appropriate products, including written reports. Projects must not duplicate work already being done.

3. **Investigator Ability and Resources**

   Investigators must have the ability and resources to successfully complete the proposed study. This will be evaluated considering ability in terms of education and training, related work experience, publications, reports, presentations, and past or ongoing work on Monitoring Program

studies; and considering resources in terms of office and laboratory (if relevant) facilities, technical and logistic support, and personnel and budget administration.

4. **Partnership-Capacity Building**

   Partnerships and capacity building are priorities of the Monitoring Program. ANILCA mandates that the Federal government provide rural residents a meaningful role in the management of subsistence fisheries, and the Monitoring Program offers substantial opportunities for partnerships and participation of local residents in monitoring and research. Investigators are requested to include a strategy for integrating local capacity development in their investigation plans. Investigators must complete appropriate consultations with local villages and communities in the area where the project is to be conducted. Letters of support from local organizations add to the strength of a proposal. Investigators and their organizations should demonstrate their ability to maintain effective local relationships and commitment to capacity building.

POLICY AND FUNDING GUIDELINES

Several policies have been developed to aid in implementing funding.

- Proposals of up to four years duration may be considered.
- Studies must be non-duplicative with existing projects. Most Monitoring Program funding is awarded to non-Federal recipients.
- Activities not eligible for funding under the Monitoring Program include: a) habitat protection, restoration, and enhancement; b) hatchery propagation, restoration, enhancement, and supplementation; c) contaminant assessment, evaluation, and monitoring; and d) projects where the primary objective is capacity building (e.g., science camps, technician training, intern programs). These activities would most appropriately be addressed by the land management agencies.
- When long-term projects can no longer be funded by agencies, and the project provides direct information for Federal subsistence fisheries management, the Monitoring Program may fund up to 50% of the project cost.

Budget Sources and Guidelines

The Monitoring Program was initiated in 2000 with an allocation of $5 million. From 2001 through 2009, up to $6.25 million was allocated annually for the Monitoring Program. The Department of the Interior, through the U.S. Fish and Wildlife Service, provided up to $4.25 million annually. The Department of Agriculture, through the U.S. Forest Service, provided up to $2.0 million annually. This budget funds continuation of existing studies (year-2, -3 or -4 of multi-year studies) and new studies. Additional funding is allocated to support the Partners for Fisheries Monitoring Program. The Office of Subsistence Management issued requests for proposals on an annual basis until 2008, and then shifted to a biennial basis. Therefore, the next call after the 2010 request will be for 2012 proposals. For 2010, it is anticipated that $6.54 million will be available for new studies; 2010 costs for existing studies were forward funded with prior allocations.

Budget guidelines are established by geographic region and data type. Proposals are solicited according to the following two data types:

Stock status and trends studies (SST) address abundance, composition, timing, behavior, or status of fish populations that sustain subsistence fisheries with linkage to Federal public lands. The budget guideline for this category is two-thirds of available funding.

Harvest monitoring and traditional ecological knowledge (HM-TEK) studies address assessment of subsistence fisheries including quantification of harvest and effort, and description and assessment of fishing and use patterns. The budget guideline for this category is one-third of available funding.

2010 FISHERIES RESOURCE MONITORING PLAN

For 2010, 41 of the 44 investigation plans under consideration were recommended for funding by the Technical Review Committee. It was anticipated that funding available for new projects would total $6.5 million, of which $1.8 million would be contributed by the Department of Agriculture, and the remainder by the Department of the Interior. The proposed cost of funding the first year of all 41 recommended projects was $5.5 million. In making their recommendations, the Technical Review Committee weighed the importance of funding new projects in 2010 with the knowledge that the next request for proposals will be issued in 2012. As in the past, any unallocated Monitoring Program funds from the current year can be used to forward fund subsequent year costs in the plan, thereby freeing future funding to provide greater support for the request for proposals in the next cycle.

The relevant portion of the draft 2010 Monitoring Plan was presented to nine of the ten Subsistence Regional Advisory Councils at their Fall 2009 meetings. The Kodiak/Aleutians Regional Advisory Council was unable to gather a quorum to take action on the draft Monitoring Plan. Overall, Council recommendations were in agreement with the recommendations of the Technical Review Committee in all cases except for project 10-209 Yukon Delta Bering Cisco Mixed Stock Analysis, for which one of the three relevant Councils recommended that funding instead be provided by the commercial fishing industry. The Interagency Staff Committee met on November 13, 2009, and concurred with the recommendations of the Technical Review Committee, resulting in no additional non-consensus items.

The Federal Subsistence Board met on January 12, 2010, and selected the 41 projects recommended by the Technical Review Committee for the 2010 Monitoring Plan, resolving the non-consensus item in favor of support. In making its selections, it was noted at the Federal Subsistence Board meeting that the status of a budget reduction in the Department of Agriculture left some uncertainty regarding the ability to fund all selected projects. Unfortunately, that budget reduction could not subsequently be fully overcome, which required implementing less than the full slate of selected projects in the Southeast Alaska study region. In order to operate within the available budget from the Department of Agriculture, Klawock Lake Subsistence Sockeye Salmon Project (10-608) will not be funded under the Fisheries Resource Monitoring Program for the 2010-2013 period under the 2010 Monitoring Plan.

The resulting 2010 Monitoring Plan includes 40 projects, of which 33 are SST projects and 7 are HM-TEK projects (Table 1), with a first year cost of $5.3 million (Table 2). This Monitoring Plan provides 26% of the funding to State agencies, 28% to Federal agencies, and 46% to Alaska Native organizations, universities, and others. Projects and funding amounts by study region are presented in Tables 3-8. An executive summary of each funded project in the 2010 Monitoring Plan follows by study region.

Table 1. Number of projects funded for the 2010 Fisheries Resource Monitoring Plan. Projects include stock status and trends (SST) and harvest monitoring and traditional ecological knowledge (HMTEK).

Geographic Region	SST	HM-TEK	Total
Northern Alaska	3	2	5
Yukon	6	1	7
Kuskokwim	6	3	9
Southwest Alaska	4	0	4
Southcentral Alaska	3	1	4
Southeast Alaska	11	0	11
Total	33	7	40

Table 2. First year cost of projects funded for the 2010 Fisheries Resource Monitoring Plan. Projects include stock status and trends (SST) and harvest monitoring and traditional ecological knowledge (HM-TEK) projects.

	Cost ($000)		
Geographic Region	SST	HM-TEK	Total
Northern Alaska	$620	$243	$863
Yukon	$556	$78	$634
Kuskokwim	$962	$184	$1,145
Southwest Alaska	$587	$0	$587
Southcentral Alaska	$461	$212	$672
Southeast Alaska	$1,427	$0	$1,427
Total	$4,613	$717	$5,329

Table 3. Northern Alaska region projects funded in 2010.

Study #	Title	Approved Budget ($000) 2010	2011	2012	2013
	Stock Status and Trends				
10-100	Selawik Drainage Sheefish Winter Movement Patterns	$316.7	$253.1	$0.0	$0.0
10-102	Unalakleet River Chinook Salmon Assessment	$302.2	$91.8	$94.7	$96.7
10-104	Selawik Lake and Hotham Inlet Sheefish Genetic Analysis	$1.4	$128.1	$115.3	$83.8
	Harvest Monitoring and Traditional Ecological Knowledge				
10-151	Bering Strait Non-salmon Fish Local Ecological Knowledge	$169.0	$188.0	$159.6	$58.6
10-152	Northwest Alaska Climate Change and Subsistence Fisheries	$74.1	$56.0	$54.4	$0.0
	Total	$863.4	$717.0	$424.0	$239.1

Table 4. Yukon region projects funded in 2010.

Study #	Title	Approved Budget ($000) 2010	2011	2012	2013
	Stock Status and Trends				
10-200	Yukon River Chinook Salmon Run Reconstruction	$80.9	$62.7	$6.9	$0.0
10-202	East Fork Andreafsky River Salmon Assessment	$145.5	$148.0	$156.1	$149.6
10-205	Yukon River Chum Salmon Mixed-stock Analysis	$124.8	$124.8	$124.8	$124.8
10-206	Nulato River Salmon Assessment	$15.0	$0.0	$0.0	$0.0
10-207	Gisasa River Chinook and Summer Chum Salmon Assessment	$120.1	$141.2	$135.1	$141.9
10-209	Yukon Delta Bering Cisco Mixed-stock Analysis	$69.4	$39.6	$22.2	$13.9
	Harvest Monitoring and Traditional Ecological Knowledge				
10-250	Yukon Climate Change Impacts on Subsistence Fisheries	$78.3	$59.6	$31.9	$0.0
	Total	$634.0	$575.9	$477.0	$430.2

Table 5. Kuskokwim region projects funded in 2010.

Study #	Title	Approved Budget ($000) 2010	2011	2012	2013
	Stock Status and Trends				
10-300	Kanektok and Goodnews Rivers Salmon Assessment	$187.6	$171.5	$184.1	$145.9
10-303	Kuskokwim River Salmon Age Sex Length Assessment	$108.7	$112.7	$117.0	$121.4
10-304	Tatlawiksuk River Salmon Assessment	$198.6	$184.6	$192.3	$200.4
10-305	Kuskokwim River Sheefish Spawning, Distribution and Timing	$54.2	$52.5	$0.0	$0.0
10-306	Kwethluk River Salmon Assessment	$207.1	$226.8	$221.3	$224.3
10-307	Tuluksak River Salmon Assessment	$205.4	$150.5	$167.2	$157.8
	Harvest Monitoring and Traditional Ecological Knowledge				
10-352	Kuskokwim Salmon Postseason Harvest Monitoring	$100.9	$87.8	$91.2	$82.3
10-353	Kuskokwim Salmon Working Group Support	$45.0	$45.2	$46.7	$45.3
10-354	Kuskokwim Salmon Inseason Harvest Monitoring	$37.6	$30.1	$31.4	$21.5
	Total	$1,145.1	$1,061.7	$1,051.2	$998.9

Table 6. Southwest Alaska region projects funded in 2010.

Study #	Title	Requested Budget ($000) 2010	2011	2012	2013
	Stock Status and Trends				
10-401	Afognak Lake Sockeye Salmon Smolt and Adult Assessment	$139.5	$141.6	$147.0	$150.9
10-402	Togiak River Chinook Salmon Assessment	$241.3	$203.7	$210.1	$0.0
10-403	Buskin River Sockeye Salmon Adult Assessment	$90.6	$93.0	$95.0	$96.8
10-404	Buskin River Sockeye Salmon Smolt Assessment	$115.7	$81.1	$0.0	$0.0
	Total	$587.1	$519.4	$452.1	$247.7

Table 7. Southcentral Alaska region projects funded in 2010.

Study #	Title	Approved Budget ($000) 2010	2011	2012	2013
	Stock Status and Trends				
10-502	Tanada Creek Salmon Assessment	$64.6	$65.8	$67.4	$69.5
10-503	Copper River Chinook Salmon Assessment	$373.0	$373.0	$373.0	$373.0
10-505	Long Lake Salmon Assessment	$23.1	$11.8	$12.0	$12.7
	Harvest Monitoring and Traditional Ecological Knowledge				
10-552	Copper River Subsistence Salmon Harvest Validation	$211.6	$194.8	$42.9	$0.0
	Total	$672.3	$645.4	$495.3	$455.2

Table 8. Southeast Alaska region projects funded in 2010.

Study #	Title	Approved Budget ($000) 2010	2011	2012	2013
	Stock Status and Trends				
10-600	Karta River Sockeye Salmon Assessment	$157.5	$142.1	$152.2	$161.4
10-601	Hatchery Creek Sockeye Salmon Assessment	$182.8	$164.6	$175.2	$173.8
10-603	Yakutat Eulachon Surveys	$27.5	$27.9	$29.9	$31.6
10-604	Klag Lake Sockeye Salmon Assessment	$128.2	$128.1	$134.5	$141.2
10-605	Sitkoh Lake Sockeye Salmon Assessment	$71.4	$68.8	$70.8	$72.8
10-606	Hetta Lake Sockeye Salmon Assessment	$181.3	$165.4	$171.9	$169.1
10-607	Kanalku Lake Sockeye Salmon Assessment	$178.8	$187.7	$197.1	$207.0
10-609	Falls Lake Sockeye Salmon Assessment	$118.7	$118.0	$123.4	$129.9
10-610	Kook Lake Sockeye Salmon Assessment	$198.4	$189.8	$187.3	$190.9
10-611	Redoubt Lake Sockeye Salmon Assessment	$25.0	$25.0	$25.0	$25.0
10-612	Neva Lake Sockeye Salmon Salmon Assessment	$157.7	$144.8	$149.0	$153.1
	Total	$1,427.3	$1,362.2	$1,416.3	$1,455.8

Project Number: 10-100

Project Title: Selawik Drainage Inconnu Winter Movement Patterns

Geographic Region: Northern Alaska

Information Type: Stock Status and Trends

Principal Investigator: Trent Sutton, University of Alaska Fairbanks

Co-Investigator(s): Christian Zimmerman, USGS, Alaska Science Center
Raymond Hander, USFWS, Fairbanks Fish and Wildlife Field Office
Christine Moran, USFWS, Selawik National Wildlife Refuge
Alex Whiting, Native Village of Kotzebue

Cost: **2010:** $316,748 **2011:** $253,070

Recommendation: Fund

Issue

Whitefishes support important subsistence fisheries in the Selawik and Kobuk river drainages (including the Selawik National Wildlife Refuge), with an annual harvest that exceeds all other fishes in the region. Given the importance of whitefish in the drainage, it is important to understand the life history, stock structure and dynamics, and habitat availability and use. Inconnu *Stenodus leucichthys*, a large, long-lived piscivorous whitefish, is one of the most important fishes harvested in the Selawik River drainage. Trends in spawning abundance, biological attributes, and spawning biology have been examined in the drainage. However, winter habitat use was not defined due to sampling constraints and telemetry restrictions. Because winter habitats can be limiting in Arctic waters, a better understanding of the distribution, movement patterns, and habitat requirements of inconnu is necessary in the Selawik and Kobuk river drainages. In particular, there is a need to understand the role of water depth, temperature, and salinity on habitat availability and use for this species. Recently, an application for the development of an ice road in this area has been approved; ice-road development requires water drawdowns to strengthen road integrity, which may negatively impact the availability and quality of winter habitat for inconnu. Climate-induced changes resulting from altered hydrological regimes may also impact habitat integrity during winter. Therefore, there is a need to better understand the winter habitat requirements, use, and availability for inconnu, an integral component of the subsistence harvest in the Selawik River drainage.

Objectives

1. Identify the late fall and winter distribution of inconnu in the Selawik and Kobuk river drainages.
2. Assess the importance of water depth, temperature, and salinity as determinants of winter habitat use of inconnu in the Selawik and Kobuk river drainages.

Methods

Inconnu will be collected using angling and seines during late July and August 2010 and 2011 in the Selawik and Kobuk rivers. All captured fish will be sexed and measured for fork length, and 80 fish

each year per river (320 fish total) will receive VEMCO-coded acoustic transmitters. This model of transmitter has a temperature and pressure (depth) sensor and an expected battery life of 268 d. All fish will also receive a coded t-bar anchor tag as a secondary mark. To track fish, twenty acoustic receiving stations, each with an affixed Star-Oddi archival tag to record temperature, depth, and salinity at that location, will be distributed at the mouths of the Selawik, Kobuk, and Noatak rivers, the inlet and outlet of Selawik Lake, and throughout Hotham Inlet. Receiving stations will be used to record transmitted temperature and depth data as fish with transmitters swim within 800 m of the receiver; these data will be downloaded after receiving station retrieval in June 2011 and 2012. The archival tags will allow for identification of environmental condition ranges utilized during winter. Coupling these data, with existing data collected previously on environmental conditions in the study area, will allow determination of the winter temperature, depth, and salinity preferences of inconnu. Using these data, winter movement patterns and home-range size of inconnu will be quantified and analyzed based on relocations and the mean movement distance of each fish. The mean and range in temperature, depth, and salinity will be examined to characterize habitat use. Movement and home-range data will be analyzed within the context of fish location and habitat-use data. Differences between habitat features will be examined for each year, between years, and among species to determine habitat preferences.

Partnerships and Capacity Building

This project represents a collaboration among the University of Alaska Fairbanks, the USGS Alaska Science Center, the USFWS Fairbanks Fish and Wildlife Field Office, the USFWS Selawik National Wildlife Refuge, the IRA Councils in the Native Village of Selawik and the Native Village of Kotzebue. University and agency personnel will work closely with IRA Council tribal members to coordinate through outreach activities the capture of tagged fish harvested by subsistence fishers. We will hire two to three village members from Selawik and/or Kotzebue to assist with collecting fish, implanting tags, and deploying acoustic receiver stations. Additional capacity building through field support will be provided each field season by the SNWR through a GS-7 level technician from the local area or a summer internship for a local high school student through the Alaska Native Science and Engineering Program. The UAF will offer pre-season and hands-on training in the field to all field assistants and any interested high school students in the area on sampling protocols, tag implantation, and data collection and analysis, as well as overall basic boater safety and First Aid training. The goal of this training is to better prepare these interested individuals for a potential career in fisheries science.

Justification

This research addresses important subsistence inconnu stocks associated with the Gates of the Arctic National Preserve, Selawik National Wildlife Refuge, Kobuk Valley Wilderness and Kobuk Valley National Park. Since Selawik River and Kobuk River inconnu are thought to share wintering habitat and because they are harvested together as a mixed-stock fishery, the research project was expanded to include both stocks. Information gathered will provide a better understanding of inconnu migration and distribution post-spawning and winter habitat requirements. Results from this project compliment past and ongoing inconnu research funded by the Monitoring Program in the Kobuk River (08-103 *Spawning location, run timing , and spawning frequency of Kobuk River sheefish,* 2008–2011) and the Selawik River (04-101 *Selawik Inconnu Abundance,* 2004–2005). It further builds on harvest monitoring information collected in 00-020 *Under Ice Gillnet Harvest of Sheefish in Hotham Inlet* 2000–2001.

Project Number:	10-102
Project Title:	Unalakleet River Chinook Salmon Assessment
Geographic Region:	Northern Alaska
Information Type:	Stock Status and Trends
Principal Investigator:	Scott M. Kent, ADF&G Division of Commercial Fisheries
Co-Investigators:	Tim Sundlov, Bureau Land Management Brendan Scanlon, ADF&G Division of Sport Fish Wes Jones, Norton Sound Economic Development Corporation

Cost: **2010:** $302,238 **2011:** $91,816 **2012:** $94,685 **2013:** $96,656

Recommendation: Fund

Issue

This proposal directly addresses the 2010 FRMP specifically identified Priority Information Need to obtain reliable estimates of abundance and age, sex, and length (ASL) composition from the Unalakleet River Chinook salmon *Onchorhynchus tshawytscha* spawning escapement. This proposal seeks funding to purchase, build, and operate a 320 ft resistance board floating weir in order to monitor the magnitude and age structure of the Chinook salmon spawning escapement. This includes the collection of ASL data to determine spawning goals and examine trends in relation to environmental changes and harvest practices. ASL and escapement data from weirs are considered to be the least biased and most accurate.

The Chinook salmon run to the Unalakleet River supports the largest Chinook salmon subsistence fishery in Norton Sound. Radio telemetry studies revealed that approximately 60% of Chinook salmon that return to the Unalakleet River drainage spawn within the upper main stem of the Unalakleet River and its upper tributaries within the Wild and Scenic portion. However, Chinook salmon returns to the Unalakleet River have declined precipitously since 2000. The North River sustainable escapement goal (SEG) has only been reached once since 2003 despite an end to commercial fishing directed at Chinook salmon, severe restrictions to subsistence and sport fisheries, and early closures to the subsistence fishery in 5 of the previous 6 years. Unalakleet River Chinook salmon were designated a stock of yield concern in 2004 by the Alaska Board of Fisheries (BOF), and the BOF continued this designation in 2007. In January 2009, further action was also taken by the Federal Subsistence Board to protect Chinook salmon by closing the Wild and Scenic portion of the Unalakleet River to Chinook salmon fishing by all users.

One possible factor contributing to the diminished productivity of Unalakleet Chinook salmon over the past decade is a major change in the quality of the spawning escapement. Historical test fishery ASL data shows a trend toward fewer of the larger and potentially more fecund females, belonging to the older age classes being caught in the ADF&G Unalakleet River test fishery. Major reductions in the number of large female Chinook reaching spawning areas could seriously impair the capacity of this stock to return to levels of abundance necessary for providing customary levels of subsistence use. A floating weir

also will provide a way to examine how harvest practices (i.e., regional large-mesh gillnet fisheries) and environmental changes affect the size and quality of the spawning escapement.

Objectives

1. Estimate daily and total Chinook salmon escapement from June 15 to July 31.
2. Describe the timing of the Chinook salmon run.
3. Estimate the ASL composition of the annual Unalakleet River Chinook salmon spawning escapement such that 95% confidence intervals of age composition will be no wider than ±10% (α=0.05, d=0.10).

Methods

This proposal seeks funding to purchase, build, and operate a 320 ft resistance board floating weir following methods described by Stewart (2002) and Tobin (1994). The proposed weir site (63 53.32 'N, 160 29.41 'W) is located approximately 22 rkm upstream from the mouth of the Unalakleet River. Weir operations will occur from mid-June until July 31 in order to count nearly 100% of the Unalakleet River Chinook salmon run. In addition to timely and accurate escapement counts, the floating weir and associated live trap will facilitate collection of large sample sizes (n=230) of unbiased ASL data from the Chinook salmon spawning escapement. Age class information representative of the entire Chinook run is an essential component of conducting recruits-per-spawner (R/S) analysis and developing scientifically-defensible escapement goals.

Inseason estimates of Chinook salmon escapements will be available to state and federal fishery managers for evaluating Chinook salmon run strength and timing. Accurate ASL data will also allow managers to assess the impacts of harvest practices on the quality and quantity of the spawning escapement. Long-term data sets compiled of escapement, age data, and harvest information will be used to reconstruct the total run and develop scientifically-defensible drainage-wide Chinook salmon escapement goals. This will lead to management of the Unalakleet River Chinook salmon subsistence fishery consistent with the State's Sustainable Salmon Policy.

Partnerships and Capacity Building

In this proposal, the requested funding is entirely for ADF&G. However, Bureau of Land Management (BLM) and the Norton Sound Economic Development Corporation (NSEDC) are providing matching funds in the form of biologist or technician time for weir fabrication (BLM), installation (BLM and NSEDC), and operations (BLM). NSEDC is also providing matching funds by operating the North River tower project during the month of July for the 2010–2013 field seasons. The local hire emphasis will promote involvement of resource users as active participants in the fisheries management process.

Justification

The Unalakleet River supports the largest Chinook salmon subsistence fishery within Norton Sound. A decline in abundance over the last several years has resulted in a decline in subsistence harvests. The results from this project would provide Chinook salmon inseason daily passage estimates and run timing. This information would aid Federal and State fishery managers in making timely decisions. In addition, the proposed work would provide managers with information to characterize spawner/recruit relationships and develop an escapement goal for Unalakleet River Chinook salmon. Currently, capacity building

consists of local hire but the investigators are encouraged to continue moving towards a more meaningful role for local organizations.

Project Number:	10-104
Project Title:	Selawik Lake and Hotham Inlet Inconnu Genetic Analysis
Geographic Region:	Northern Alaska
Information Type:	Stock Status and Trends
Principal Investigator:	Raymond Hander, U.S. Fish and Wildlife Service Fairbanks Field Office
Co-Investigators:	Jeffrey Olsen, USFWS Fairbanks Field Officer James Savereide, ADF&G Division of Sport Fish Randy Brown, USFWS Fairbanks Field Office John Wenburg, USFWS Conservation Genetics Laboratory Alex Whiting, Native Village of Kotzebue

Cost: **2010:** $1,350 **2011:** $128,147 **2012:** $115,278 **2013:** $83,790

Recommendation: Fund

Issue

This project primarily addresses the need for "baseline harvest assessment and monitoring of subsistence fisheries..." identified as a priority for the Northern Region in the 2010 Fisheries Resource Monitoring Program. Secondarily, this project addresses the priority information need to "identify and characterize critical factors affecting population dynamics of Selawik River inconnu".

Inconnu are one of the most important food fishes in the Kotzebue region of Northwest Alaska. As a subsistence resource, inconnu are captured and used during all seasons of the year for human consumption and dog food. There are two known spawning populations (the Kobuk and Selawik River populations) of inconnu in Northwest Alaska but there is no information on the contribution of these populations to the area fisheries. The preliminary genetics work of Miller et al. (1998) suggested that genetic mixed-stock analysis (MSA) could be used to address this issue as well as clarify the geographic distribution of the two populations during migration. In this study we will conduct a genetic MSA of the winter subsistence gillnet fishery for inconnu in Hotham Inlet and Selawik Lake. The majority of the regional annual inconnu harvest comes from this fishery with no current means to determine individual stock contributions. This study will provide estimates of the contribution of each population to the winter fishery in 2010/2011 and 2011/2012. The results will help managers evaluate the extent to which the population composition in the fishery varies spatially and temporally and specifically assess the potential for overharvest of the numerically smaller Selawik River population. This information may reveal patterns of migration that influence the population dynamics and exposure to harvest of Selawik River inconnu. Monitoring the population contribution to the winter subsistence gillnet fishery may also inform managers of factors influencing trends in abundance.

The current state of knowledge regarding total annual harvest, total Kobuk or Selawik inconnu stock abundance and their exploitation rates, and spawning population size are in some cases lacking. Effort to routinely monitor harvest (MSA and numbers of fish), estimate spawner population abundance, and estimate spatial and temporal inconnu distribution could provide a coordinated set of tools that may aid fishery manager's abilities to make more informed decisions about Kobuk and Selawik inconnu stocks.

Objectives

1. Estimate the proportional contributions of Kobuk and Selawik River inconnu stocks to spatial and temporal strata of the winter subsistence fishery.
2. Test the hypothesis that proportional contributions of Kobuk and Selawik River inconnu stocks from individual sample areas are equivalent and describe the spatial and temporal distribution of inconnu stocks.

Methods

We will collect inconnu fin clips (N=200) from each of four locations during the winter subsistence gillnet fishery in Hotham Inlet and Selawik Lake. Given the level of genetic differentiation between Kobuk and Selawik river inconnu, a sample size of 200 per collection is likely sufficient to accurately determine stock proportions using MSA. Collections will be made during the winters of 2010–2011 and 2011–2012 in both November and March for a total of 16 collections and 3,200 samples.

Sample collectors will be responsible for collecting samples from subsistence harvested inconnu and properly preserving them according to criteria from the USFWS Conservation Genetics Laboratory (CGL). An attempt will be made to collect an approximately equal number of genetic samples from all active fishers in each of the four sample areas. Sampling procedure and training will be provided to collection personnel before the collection process begins, including inspecting inconnu for prior scientific project's markings with fin clips, floy tags, and radio tags.

Genetic MSA analysis will be carried out by the USFWS Conservation Genetics Laboratory to estimate the proportion of Kobuk and Selawik River inconnu in each of the 16 subsistence fishery collections (N=200 per collection) using baseline data and a Bayesian mixture modeling method.

Partnerships and Capacity Building

Contract agreements will be made with Native Village of Kotzebue (NVOK) and the Selawik IRA Council to hire at least one person from each community to collect genetic samples. Specific training to address project specific sampling procedures and protocols will be conducted for individuals prior to initiating sampling. On the capacity building scale adapted from Berkes et al. (1991), this project will be at a level 5 collaboration where the research team utilizes local knowledge of fishing site distribution and employs/contracts individuals from the NVOK and the Selawik IRA Council for field sampling purposes.

Justification

Kobuk and Selawik River inconnu support an important winter subsistence fishery in Hotham Inlet. This under-ice fishery comprises the largest portion of total documented inconnu harvest in the Kotzebue region. Exploitation of inconnu is poorly understood, because of incomplete information on stock abundance, stock composition, and annual harvest. During this project, researchers will collect tissue samples from subsistence harvested inconnu to conduct genetic mixed-stock analysis. Information gathered will provide an estimate of the contribution of each stock to the gillnet fishery and help managers evaluate the potential harvest. This project will compliment past and ongoing inconnu research funded by the Monitoring Program in the Kobuk River (08-103 *Spawning location, run timing , and spawning frequency of Kobuk River sheefish,* 2008–2011) and the Selawik River (04-101 *Selawik Inconnu Abundance,* 2004–2005). It further builds on harvest monitoring information collected in 00-020 *Under Ice Gillnet Harvest of Sheefish in Hotham Inlet* 2000–2001.

Northern Region

Project Number:	10-151
Project Title:	Bering Strait Non-salmon Fish Local Ecological Knowledge
Geographic area:	Northern Alaska
Information Type:	Harvest Monitoring/Traditional Ecological Knowledge
Principal Investigator:	Julie Raymond-Yakoubian, Kawerak, Inc.

Cost: **2010:** $168,962 **2011:** $188,007 **2012:** $159,621 **2013:** $58,600

Recommendation: Fund

Issue

This project addresses a priority information need in the 2010 Fisheries Resource Monitoring Program Request for Proposals for the Northern Alaska Region regarding the subsistence harvest of fish. The project will document current levels of subsistence use of non-salmon fish by five Bering Strait region communities: Shishmaref, Wales, Stebbins, Teller and Brevig Mission. Some salmon stocks in the Bering Strait region have been declining for over a decade and based on resident reports and other preliminary observations, non-salmon species appear to also be experiencing changes in population size. This research attempts to document and quantify the use of non-salmon species by these five communities. In addition to documenting local knowledge regarding these species, the project will provide continuity in harvest data collection (following the surveys conducted by Ahmasuk and others in 2008), which included non-salmon species) for the five communities included in the investigation plan. Documenting past and present harvest patterns and trends will be accomplished, including the importance of non-salmon species in local subsistence economies.

The interview portion of this project also will address the Interregional 2010 Fisheries Resource Monitoring Program Request for Proposals priority information need on the effects of climate change on subsistence fisheries. Together with D. Andersen (Research North) and C. Brown's (Alaska Department of Fish and Game) proposed study exploring climate change implications in the Yukon-Kuskokwim River system (OSM Proposal No. 10-250), and C. Carothers (University of Alaska Fairbanks) study of local observations of climate change relevant to subsistence fisheries in Northwest Alaska (OSM proposal No. 10-152), this study begins to address the identified need for interregional comparisons of the effects of climate change on subsistence fisheries and the management implications of such effects.

Interviewees will be asked for their assessment of the river and shore ice, any changes that they have observed in the ice, and how those changes have affected fishing efforts during winter months. Climate changes also may be impacting parts of the fish life cycle such as migratory patterns and run timing. Any associations between climate changes and non-salmon species will be sought and patterns and trends will be highlighted.

Objectives

The following are the objectives of the project:

1. Estimate harvests of non-salmon fish species by community for the 2009–2010 harvest season;

2. Estimate and compare households' evaluation of this harvest compared to other recent years;
3. Document the percentage of households using, harvesting, receiving, trading and giving away non-salmon species
4. Document local ecological knowledge and information on non-salmon fish species utilized by residents of the four study communities.

Methods

In addition to background research and archival research at Kawerak's Eskimo Heritage Program archives, this project will rely on three major methods to record the information sought: household harvest surveys, local expert interviews, and use-area mapping. The communities of Shishmaref, Wales and Stebbins all have significant associations with Federal conservation units. While Teller's and Brevig Mission's association with Federal conservation units is less strong, they are communities representative of many others in the region in terms of size, Alaska Native residency numbers, and dependence on subsistence foods, particularly fish. The five communities also provide a fairly diverse geographical distribution across the Bering Strait Region.

Household surveys will be conducted with a sample of households in each participating community Following the household surveys, a minimum of eight semi-structured interviews with local experts will be conducted in each community. Some of the topics to be discussed during interviews include (for each non-salmon species): taxonomy, changes in population numbers, species health and distribution, current/previous harvest methods and location, processing and storage methods, economic and cultural importance, non-salmon related place names, habitat preferences, spawning areas and changes in climate that may impact non-salmon fish and fishing areas. During interviews, maps will be used as prompts and relevant information will be mapped using USGS 1:250,000 maps with mylar overlays (e.g., locations of spawning areas, rearing habitat, traditional harvesting areas, fish camps, etc.).

Partnership/Capacity Building

Kawerak is the Alaska Native nonprofit organization for the Bering Strait region and has been operating since 1973 to provide a variety of services to the tribes in the region. The principal investigator is a Kawerak staff member and is responsible for all aspects this research. Kaweak will develop the household survey instrument and the interview protocol. Each of the five IRA councils will have the opportunity to review a draft interview protocol and to suggest changes. Kawerak will hire at least one local surveyor (to conduct harvest surveys) and one local assistant (to assist the principal investigator with interviews) from each participating village. A student intern will be hired and trained for the interview portion of the project as well. At least 40 local residents will be interviewed and have the opportunity to provide their input on the status and future of the non-salmon fisheries in the region.

Justification

The goal of this project is to estimate current levels of subsistence use and document local knowledge about non-salmon fish in the four Bering Strait communities of Shishmaref, Wales, Stebbins, Teller, and Brevig Mission. Some salmon stocks in the Bering Strait region have been declining for over a decade and anecdotal information indicates that non-salmon fish harvests may be increasing. In addition to conducting a household survey to attain harvest estimates, investigators will conduct a number of key informant interviews to provide contextual information on a variety of topics related to non-salmon fish species, as well as collecting some information on the effects of climate change on subsistence fisheries. Attaining reliable baseline harvest estimates, monitoring subsistence fisheries throughout the Northern Region, and documenting the effects of climate change on subsistence fisheries are high strategic priority

information needs in the Fisheries Resources Monitoring Program 2010 Request for Proposals. The partnership component is high with a strong capacity building component between Kawerak and local communities, and the investigator is qualified to conduct the work.

Project Number:	10-152
Project Title:	Northwest Alaska Climate Change and Subsistence Fisheries
Geographic Region:	Northwest Alaska
Information Type:	Harvest Monitoring and Traditional Ecological Knowledge
Principal Investigator:	Dr. Courtney Carothers, University of Alaska Fairbanks
Co-Investigators:	Dr. J. Andrés López, University of Alaska Fairbanks Dr. Ellen D. S. López, University of Alaska Fairbanks

Cost: **2010:** $74,082 **2011**: $55,984 **2012:** $54,413

Recommendation: Fund

Issue

This study will document local observations of climate change relevant to subsistence fisheries in three communities in Northwest Alaska: Noatak, Selawik, and Unalakleet. This project addresses a research priority identified in the 2010 Fisheries Resource Monitoring Program Request for Proposals to document effects of climate change on subsistence fishery resources and uses and describe management implications. Together with D. Andersen (Research North) and C. Brown's (Alaska Department of Fish and Game) proposed study exploring climate change implications in the Yukon-Kuskokwim River system (OSM Proposal No. 10-250), and J. Raymond-Yakoubian's (Kawerak, Inc) study of local ecological knowledge of non-salmon fish in the Bering Strait region (OSM proposal No. 10-151), this study begins to address the identified need for interregional comparisons of the effects of climate change on subsistence fisheries and the management implications of such effects. This study will systematically document traditional ecological knowledge of climate and related ecological changes that affect the harvest, processing, and practices of subsistence fisheries. This documentation, along with an analysis of the prevalence and perceived importance of such observations will inform adaptive subsistence management that can respond to changing environmental conditions.

Objectives

1. Document traditional and local ecological knowledge of climate changes in three study communities.
2. Analyze key similarities and differences between the three study communities of climate change observations.
3. Document the effects of climatic and related changes on subsistence fishing in the three study communities.
4. Analyze key similarities and differences in the effects of climate change and related changes on subsistence fisheries among the three study communities.
5. Contextualize climate-related changes to other environmental, social, economic, or cultural shifts that affect subsistence fisheries.

Identify emerging themes from interview and survey data pertinent to subsistence practices and adaptations and related implications for subsistence management.

Methods

A systematic review and synthesis will be conducted of literature, data, and archival sources that supply biological and traditional knowledge on the targeted subsistence fishery species in each community. Ethnographic research will be conducted to compare and contrast observations of change across a range of ecological zones. Three study communities have been selected—Noatak, Selawik, and Unalakleet—in distinct locations in the region. Semi-structured, ethnographic interviews with expert informants will be conducted. With the assistance of village IRA councils and the project Fisheries Steering Committee (see below), key informants (e.g., knowledgeable fishers, elders, and regional experts) will be identified to explore knowledge about climate and related ecological changes of concern for subsistence fishers. How subsistence harvesters may be adapting their harvest practices to respond to climate-related changes will be documented. Additionally, a short survey instrument will be used to systematically gather information on observed changes. This method, paired with cultural consensus analysis, will provide a systematic evaluation of how widely shared observations are among a set of users within and between communities (as well as potentially among users within different regions). Based on the 6–10 key informant interviews in each community, the questions on the survey will be developed. Respondents will be asked to confirm those observations based on their own experiences. Other survey questions will include a ranking of the perceived relative importance of observed changes. Open-ended questions exploring current and anticipated impacts on subsistence fisheries will provide a necessary context to evaluate these changes and their impacts. The survey results, along with the ethnographic context, will provide valuable data to inform recommendations for adaptive subsistence management.

Partnership and Capacity Building

The project places great emphasis on building partnership and capacity for enhancing subsistence fisheries-related research and management in Northwest Alaska. Specifically, the following will be accomplished:

1. Creating a fisheries steering committee comprised of regional and local experts who will share decision-making power in guiding all research activities.
2. Identifying and hiring a community advisor in each of the three target communities. Advisors will assist with developing culturally appropriate and feasible project materials and protocols for, and be trained in, data collection skills and ethics. Once trained, advisors will assist with data collection for this project, and fortify a research infrastructure that can be employed for future fisheries-related research.
3. Sharing all data with and disseminating findings generated from this project to participating communities. All audio-files and transcripts from interviews and surveys will be housed at the Eskimo Heritage Program. All findings will be reported back to community members via agreed upon, user-friendly methods.
4. Offering additional co-learning opportunities. The research team will offer and participate in presentations, workshops, and other knowledge-sharing events, with an emphasis placed on working with local schools and community-based organizations.

Justification

The goal of this project is to document local observations of climate change in three communities in Northwest Alaska—Noatak, Selawik, and Unalakleet—as well as to document the effects of these changes on subsistence fisheries and management. Three communities were selected based on proximity to Federal public waters as well as a range of ecological zones: the riverine community of Noatak, the coastal lagoon community of Selawik in the Northwest Arctic area, and the coastal community of Unalakeet in Norton Sound. The relevance of this project is strengthened by collaboration with OSM Projects 10-250 and 10-151. The project will accomplish its objectives through a literature review, key informant interviews, and a household survey. Community advisors will be hired in each community. The strategic priority of documenting the effects of climate change on subsistence fishery resources and uses and management implications of these changes is high, and the linkage to Federal management is strong. The capacity building is fairly strong, and the investigators are well qualified to do the work.

Project Number:	10-200
Project Title:	Yukon River Chinook Salmon Run Reconstruction
Geographic Region:	Yukon
Information Type:	Stock Status and Trends
Principal Investigator:	Brian G. Bue, Bue Consulting LLC
Co-Investigator:	Toshihide Hamazaki, ADF&G Division of Commercial Fisheries

Cost: **2010:** $80,826 **2011:** $62,698 **2012:** $6,883

Recommendation: Fund

Issue

Yukon River Chinook salmon populations support subsistence and commercial fisheries within the Yukon Delta National Wildlife Refuge as well as other federal conservation areas scattered throughout the Yukon River drainage. The status of these populations has been of concern in recent years largely due to low run abundance. While these declines are thought to be associated with climate change or anomalous ocean conditions, the specific cause is unknown. A reliable time series of run size, harvest, and escapement information combined with age composition data is essential to understand the production of Chinook salmon in the Yukon River drainage as well as to better understand the mechanisms that drive variation in abundance. This knowledge is the cornerstone of fisheries management in Alaska and is important for evaluating the consequences of past and future fishery management strategies and decisions; evaluations which ultimately moves fisheries management towards goals that maximize the likelihood of sustainable salmon fisheries in the future.

The uses for the basic information provided by this project are numerous and essential for researching a wide range of topics dealing with the Chinook salmon population in the Yukon River, Bering Sea, and North Pacific Ocean. Besides evaluating the stock recruitment relationship for the Yukon River stock, an evaluation of the exploitation rates by age and size for both the subsistence and commercial fisheries will be possible, as will an evaluation of the overall effect of interceptions in other fisheries such as the Bering Sea Pollock fishery. A long historical time series of Chinook salmon abundance when combined with information from other species, weather, and other environmental data may be useful for other researchers evaluating the long-term effects of climate change.

Objectives

1. Estimate total abundance and spawning escapement of Chinook salmon in the Yukon River from 1976 through 2011.
2. Describe the spawner-recruit relationship of Yukon River Chinook salmon to assess the influence of parental escapement on variations in return.

Methods

This project will estimate the historical total run size of Chinook salmon to the Yukon River from approximately 1976 thru 2011 using a statistical model that incorporates all available and relevant historical data (e.g., weir, tower, and aerial counts, subsistence and commercial harvest numbers, test-fishery information, mark-recapture estimates, sonar estimates, and stock composition information obtained from genetics. Historical escapements can then be estimated by subtracting the documented

catches from the estimated total runs. Available age composition information will be combined with the estimated total runs and escapements to build a brood table for the Yukon River Chinook salmon population and stock recruitment analysis will be used to explore the stock productivity relationships and provide information for assisting with setting escapement goals.

Partnerships and Capacity Building

This project will hire a seasonal Fish and wildlife technician for collection, compilation, and error checking of the available data. While selection of the technician must follow the established procedures of State of Alaska, every effort will be made to encourage students from rural areas to apply. The software developed for the run reconstruction model will be given to the ADF&G Yukon Area staff who will continue to update the input data files and make future run-reconstructions as needed. Hamazaki will assist with this transition.

Justification

This investigation plan addresses a high priority strategic data need for the Yukon region. The subsistence Chinook salmon fishery of the Yukon River is one of the largest and most important in the state. This fishery is conducted largely within the boundaries of the Yukon Delta National Wildlife Refuge in the lower river and six other conservation units located in the middle and upper portions of the drainage. Conservation concerns for these salmon stocks over the last decade have been addressed by the Board of Fisheries designation as a Stock of Yield Concern and specific regulatory measures designed to rebuild these stocks. The study design was adequately described and technically sound; the investigators have successfully applied the proposed methods for run reconstruction to salmon stocks in the Kuskokwim River. The investigation plan identifies specific data sources that will be available for developing the run reconstruction. A critical component of the run reconstruction is availability of a reliable estimate of the total run for at least some years. The methods proposed are effective for describing patterns or trends in run abundance, but require total run estimates to calibrate the model. The investigators identified a number of potential approaches for providing these estimates; thereby, greatly increasing the likelihood of producing useful estimates of historic abundance. The proposed work potentially could introduce innovative methodologies and management tools for the Yukon River Chinook salmon fisheries. The experience and training of the investigators is well suited to successfully accomplishing study objectives.

Project Number:	10-202
Project Title:	East Fork Andreafsky River Salmon Assessment
Geographic Area:	Yukon
Information Type:	Stock Status and Trends
Principal Investigator:	Gerald F. Maschmann, USFWS Fairbanks Field Office

Cost: **2010:** $145,530 **2011:** $148,003 **2012:** $156,066 **2013:** $149,617

Recommendation: Fund

Issue

Assessment of Yukon River salmon fisheries management actions is difficult due to the limited number of escapement estimates in the drainage. The abundance and run timing of spawning populations of salmon within the Yukon River drainage have been identified as priority information needs by the Regional Advisory Councils (RACs), the Yukon River Comprehensive Management Plan (YRCMP) for Alaska (Holder and Senecal-Albrecht 1998), and the Yukon River Joint Technical Committee Plan. The Andreafsky River system supports relatively large populations of Chinook *Oncorhynchus tshawytscha*, summer chum *O. keta* and coho salmon *O. kisutch*. The project's location in the lower river allows its escapement estimate to be used in-season by fishery managers. It is also the only tributary escapement monitoring project located downstream of the Pilot Station sonar and monitors stocks that would otherwise go unmonitored. Data from the project are useful for post-season evaluation of management practices and provide insights for future run projections. The East Fork Andreafsky River (EFAR) weir has operated since 1994 and provides one of the longer term databases on escapement in the entire Yukon River, meeting the priority information need of OSM's 2008 Fisheries Resource Monitoring Program to "maintain reliable estimates of Chinook and chum salmon escapement over time".

Objectives

1. Determine daily escapement numbers and run timing of Chinook and chum salmon into the East Fork Andreafsky River.
2. Estimate the age, sex, and length composition of adult Chinook and chum salmon in the East Fork Andreafsky River.
3. Determine the numbers of resident fish species passing the weir.

Methods

A resistance board weir will be installed and operated on the Andreafsky River from mid June through early August each year from 2010 to 2013. Weir picket spacing (4.8 cm) is designed to remain functional during high water flow, but allow some small pink salmon and resident fish to pass through the weir undetected. Visual inspection of the weir for holes and structural integrity will be conducted on a daily basis. During visual inspections, the weir will be cleaned of debris. One live trap and two passing chutes will allow salmon and resident species to migrate through the weir, where their passage will be enumerated daily. Fish will be sampled to collect biological information as they pass through the live trap.

A staff gauge will be installed upstream of the weir to measure daily water levels. Staff gauge measurements will be calibrated to correspond with the average water depth across the river channel at

the upstream edge of the weir. Water temperature will be collected once daily between 0730 and 0830 hours. Two passage chutes will be installed, one nearer the left bank and the other near the right bank. A fish trap will be installed on the left passage chute to facilitate efficient biological sampling during various river stage heights. The right passage chute will be for use during extreme low water levels or when excessive numbers of fish began building up below the weir. Final trap and chute placement will be decided based on 2010 river bottom topography to account for potential overwinter changes. The right passage chute was used intermittently in previous years. All fish, except whitefish (Coregoninae), will be enumerated by species as they pass through the live trap. Fish will be counted 24 hours per day and the numbers will be recorded hourly.

Partnerships and Capacity Building

Personnel from the FFWFO and the YDNWR continue to meet with local residents and government entities at village meetings. In recent years, the FFWFO has worked with tribal governments, St. Mary's School District, the Bering Sea Fishermen's Association (BSFA), AVCP, YDNWR, YRDFA to cooperatively host an environmental education camp at the Andreafsky River weir and to teach high school students about salmon life cycles and the fish weir operations. Other environmental education camp cooperators are and local schools and village councils. The FFWFO will work with the Fishery Information Service (FIS) Fisheries Resource Monitoring Program personnel to strengthen the capacity building component of this project. Consultation will occur with Yupiit-Andreafsky Tribal Council (YATC) leaders, and Algaaciq Tribal Government leaders, for hiring people from the local area, and David Herbert, St. Mary's School Principal, and Jay Hootch for coordination with the Science Camp. Consultation has occurred with Michael Reardon on obtaining an Alaska Natives in Science and Engineering Program participant from the lower Yukon River to work at the Andreafsky River weir for 2009. The FFWFO staff has established a positive rapport with villages, hired up to four local residents a year (two of these persons have worked a combined total of 17 seasons), participated in YRDFA meetings and seminars, and utilized the YDNWR for local logistical support and training. It is the intent of the FFWFO to incorporate the local tribal councils into the operation and maintenance of this project so they will have direct involvement and understanding of the FFWFO operating procedure for collecting salmon data for management use. FFWFO leases land at the weir site from Nerklikmute Native Corp. and also has a lease with Ciunerkiurvik Native Corp. for storage facilities. While in transit, personnel commonly domicile at local facilities, and supplemental field supplies and food will be purchased in St. Mary's.

Justification

The East Fork Andreafsky River weir is an established and successful monitoring project that provides escapement and run strength data used to ensure sustainability of subsistence fisheries and conserve fisheries stocks in the Andreafsky River. These stocks are harvested by a large lower river subsistence fishery, and pass through commercial fishing districts between the mouths of the Yukon River and Andreafsky River confluence. Fisheries managers regard escapement monitoring data provided by this project as a primary indicator of the status of lower Yukon River Chinook and summer chum stocks. This project participated in the OSM temperature monitoring initiative in 2008 and 2009. The investigator is encouraged to participate in habitat monitoring activities that may be initiated during this period of funding. Habitat evaluation studies of critical salmon spawning areas in the Yukon River where population monitoring occurs provide a unique opportunity to evaluate how salmon populations may respond to shifting habitat mosaics resulting from climate change. The project would provide a very cost effective research platform supporting future habitat assessment and monitoring.

Project Number:	10-205
Project Title:	Yukon River Chum Salmon Mixed-stock Analysis
Geographic Area:	Yukon
Information Type:	Stock Status and Trends
Principal Investigator:	Blair Flannery, USFWS Conservation Genetics Laboratory
Co-Investigator:	John Wenburg, USFWS Conservation Genetics Laboratory

Costs: **2010:** $124,758 **2011:** $124,758 **2012:** $124,758 **2013:** $124,758

Recommendation: Fund

Issue

This project relates to the following priority information need identified in the 2010 Office of Subsistence Management Request for Proposals:

- *Estimate stock contributions and run-timing for Chinook and chum salmon, with an emphasis on lower Yukon River main-stem fisheries.*

This proposal is a continuation and expansion of Fisheries Resource Monitoring Program (FRMP) projects 04-228 and 06-205, which have provided in-season stock composition estimates of fall chum salmon to fishery managers within 24 to 48 hours of receiving samples from Pilot Station sonar test fisheries for the past five years. The scope of the project will expand to include stock composition estimation of summer chum salmon. The stock composition of the Yukon River summer chum run has been in flux over the last decade, prompting fishery managers to request in-season stock composition data. This expansion was specifically requested by the Alaska Department of Fish and Game (ADFG) for the 2008 season, and they would like to see the work continue.

Yukon River chum salmon move through numerous federal holdings during their spawning migration and are an important food resource for residents of the Yukon River drainage, whose take of chum salmon accounts for 70% of the Yukon River salmon harvested in subsistence fisheries. Returns of Yukon River chum salmon have fluctuated widely, and low returns have resulted in subsistence shortfalls because of fishery closures and restrictions. Such shortfalls are especially hard on residents where a subsistence lifestyle is a necessity because of limited economic opportunities.

The disparate strength of individual stocks within and among years makes it clear that in-season stock return data facilitates management. The USFWS, ADFG, and Department of Fisheries and Oceans Canada (DFOC) personnel responsible for fishery management have requested that this work be continued and expanded. In this project, we will provide estimates of stock compositions for major summer and fall chum salmon stock groups to continue to facilitate Yukon River chum salmon management.

Objectives

1. Estimate the stock compositions of summer and fall chum salmon sampled from the Pilot Station test fishery each year (June 1–August 31).
2. Assess the accuracy of the results and their utility for management by comparison with other sources of escapement and harvest data.

Methods

Genetic samples will be collected from every chum salmon caught in the Pilot Station sonar test fishery from June 1 – August 31, and sent to the CGL every week and at the conclusion of each run pulse. Samples will be stratified by time period or run pulse and a subsample of size 200, selected so that daily sample size is proportional to the daily sonar passage estimate within a stratum, will be genotyped for each stratum of the run. Stock abundance estimates will be derived by combining the sonar passage estimates with the stock composition estimates. To evaluate the concordance of various data sources, a post season analysis will be conducted to compare these stock specific abundance estimates against escapement and harvest estimates, which should prove useful for assessing the study design of this and other enumeration projects.

Partnerships/Collaboration

We will work with ADFG biologists to coordinate sample collection from the Pilot Station sonar test fishery. We will contract with the Association of Village Council Presidents (AVCP) to hire a local to collect the genetic samples. We will work with USFWS Yukon Delta National Wildlife Refuge staff to transport samples from Pilot Station. We completed the baseline in partnership with the DFOC. We will consult, collaborate and coordinate with ADFG, USFWS, and DFOC managers.

Justification

This proposal would support continuation of inseason stock assessment of summer and fall races of Yukon River chum salmon. The study is a continuation of work based on a sound, relatively uncomplicated study design and is greatly benefitted by data inputs that are based on several decades of genetic stock biology and sonar enumeration research and application. Abundance by stock are calculated by combining sonar passage and stock composition estimates for variable time strata of 3-7 day intervals. A post-season analysis of escapement and harvest monitoring data is compared to stock specific abundance estimates to assess and adjust the study design. This work has proven to be important to the management of subsistence fisheries and conservation of chum salmon stocks. With the high cost of current monitoring projects, it is hoped that this genetic stock identification project in the lower Yukon River will provide a long term and cost effective alternative for salmon management. The project also addresses important information needs identified in the 2010 request for proposals.

Project Number:	10-206
Project Title:	Nulato River Salmon Assessment
Geographic Region:	Yukon
Information Type:	Stock Status and Trends
Principal Investigator:	Brandy Berkbigler, Tanana Chiefs Conference (TCC)
Co-Investigator:	Robyn George, Nulato Tribal Council (NTC)

Cost: **2010:** $14,990

Recommendation: Fund

Issue

Management of the Yukon River salmon fishery is complex, due to its mixed stock nature and salmon run size. Monitoring salmon escapement is considered the most essential information for salmon management and long term escapement monitoring data is thought to be the most valuable and hardest to maintain but it is necessary to ensure the continued viability of salmon stocks. The Nulato River is a very productive system for Chinook and chum salmon which contribute to the subsistence and commercial fisheries harvest occurring in the middle portion of the Yukon River drainage. Tower counts on the Nulato River have documented escapements of Chinook as high as 4,766 and chum salmon as high as 158,000. In the J. Eiler et.al tagging study 1.7% (2003) and1.5% (2004), of the tagged Chinook salmon returned to the Nulato River compared to 1.1% for both years at the Tozitna River. An aerial based Chinook salmon Sustainable Escapement Goal was set for both forks of the Nulato River in 2001 (800 for the North and 500 for the South) and then combined and converted into a range of 940–1,900 in 2005. There has been increasing interest expressed from NTC to participate in salmon assessment projects by reestablishing the Nulato weir. The weir would provide managers and researchers reliable escapement counts and accurate escapement information for run reconstructions, which will assist in monitoring changes in salmon abundance and serve as an avenue for local education and meaningful involvement. This project will provide the feasibility information by assessing the remaining weir materials and possible weir site locations to reestablish a weir on the Nulato River.

Objectives

1. Consultation and outreach to the community on the project
2. Assess weir materials currently left at the site in 2003
3. Perform site evaluations for the weir

Methods

To meet the first objective Brandy Berkbigler (TCC) and Robyn George (NTC) will work together to host a community meeting prior to the summer season to introduce the project to community residents, document local concerns about salmon harvests, and answer questions about the project. The community education efforts will be focused on the role of Nulato residents in the management of important subsistence salmon resources. TCC will contract Rob Stewart (ADF&G) to assess weir materials currently left at the site in 2003 and perform a site evaluation of the previous weir site and identify a new weir site location if the river profile has changed. If findings from this feasibility project are favorable, the PI and co-investigator will be submitting a proposal in the next funding call for the installation and operation of a weir on the Nulato River.

Partnerships and Capacity Building

NTC expressed interest to TCC in becoming more involved in the monitoring and management of subsistence salmon resources by re-establishing the Nulato River weir abandoned in 2003. TCC partnered with NTC to conduct a feasibility study in assessing the remaining weir materials and conducting a weir site evaluation and provide community education and a look into involvement and employment opportunities in an escapement monitoring project for Chinook and summer chum salmon in the Nulato River. TCC with assistance from ADF&G will train NTC in the weir site feasibility and equipment essentials of conducting a weir project for monitoring escapement of locally utilized subsistence salmon resources. In addition NTC and TCC will promote community involvement through addressing local concerns with monitoring projects and management of subsistence resources. If findings from this feasibility project are favorable the PI and co-investigator will be submitting a proposal in the next funding call for the installation and operation of a weir on the Nulato River.

Justification

The proposed project would continue dialogue with Nulato community residents regarding the construction and operation of a salmon monitoring weir in the Nulato River. The location, logistics, operations, use of the data and opportunities for employment will be discussed with local residents. Weir materials and alternative sites will be assessed as preparation for development of a future proposal to install and operate a weir. The objectives of the proposal are clear and costs are reasonable. While the technical merits of operating a weir is what the proposed work will help determine, it is clear that monitoring data would be very useful for management and conservation of salmon resources that spawn in the Nulato River. The high level of capacity development supported by the proposal is also noteworthy.

Project Number:	10-207
Project Title:	Gisasa River Chinook and Summer Chum Salmon Assessment
Geographic Region:	Yukon
Information Type:	Stock Status and Trends
Principle Investigator:	Jeff Melegari, USFWS Fairbanks Field Office

Cost: **2010**: $120,110 **2011:** $141,169 **2012:** $135,106 **2013**: $141,862

Recommendation: Fund

Issue

Assessment of management actions for Yukon River salmon fisheries is difficult due to the limited number of escapement studies in the drainage. Within the Koyukuk River drainage, a major tributary in the middle-lower Yukon River, the Gisasa River weir is one of two projects (the other being Henshaw Creek weir) that provide inseason information to assess management actions as well as a postseason index of escapements within the Koyukuk River. Federal and state managers have consistently identified this project as an important source of information for fishery management. Also, the Yukon River Comprehensive Management Plan describes the need for escapement monitoring projects in the Koyukuk River region. Further, in November 2005 the Joint Technical Committee of the Yukon River Panel identified the Gisasa River weir as the second highest priority among lower river projects for Chinook salmon. The project was also identified as the third highest priority for summer chum salmon. The Gisasa River weir has operated for the past fifteen years and provides one of the longer term databases on escapement within the Yukon River.

Objectives

This project is proposed as a four year (2010-2013) study. The objectives are:

1. Determine the daily and seasonal passage of Chinook salmon and summer chum salmon;
2. Describe the age, sex, and length of these species;
3. Enumerate the daily passage of other fish species.

Methods

A resistance board weir will be installed in the Gisasa River approximately 4 km upstream from the mouth. The weir and passing chute will funnel fish into a live trap, where they can be held for sampling or passed through and counted. All fish passing through the weir will be identified to species and enumerated, with the exception of whitefish spp *Coregonus* and *Prosopium* spp. Non-salmon species will not be handled, so positive identification of whitefish to species will not be possible. Therefore all whitefish species will be grouped under the subfamily Coregoninae. Age-sex-length data will be collected from Chinook salmon and chum salmon. The goal will be to sample 160 salmon/species/week. Samples will be measured for length to the nearest 5 mm mid-eye to fork of tail, sex will be determined from external secondary characteristics, and scales will be collected for aging.

Partnership/Capacity Building

Fairbanks Fish and Wildlife Field Office (FFWFO) and the Refuge have strived for local involvement and capacity building with the project, and initial interest had been expressed by residents in the Galena area. However, the remoteness of the weir site reduces the attraction of the project, and subsequent interest has not developed. Nevertheless, both FFWFO and the Refuge are committed to continually promoting capacity building by describing project opportunities at Regional Advisory Council, Yukon River Drainage Fisheries Association, and Refuge coordination meetings. During the 2008 season a student in the Alaska Native Science & Engineering Program (ANSEP) working at the Koyukuk National Wildlife Refuge visited and assisted at the Gisasa weir for a short period of time and expressed interest in future employment. She has since been hired by our office for the 2009 field season. Alaska Department of Fish and Game has been consulted and will assist by ageing scales.

Justification

This project is supported by State and Federal fisheries managers and addresses an important data need identified in the request for proposals. The project is technically sound and supports one of the most comprehensive data set (14 consecutive years) for salmon escapement in the middle Yukon River. This project is also viewed as high priority because of its strategic location as an index of escapement for Chinook and summer chum salmon in the lower Koyukuk River and as a platform for conducting other salmon studies including temperature monitoring in 2008 and 2009. The investigators are encouraged to participate in habitat monitoring activities that may be initiated during this period of funding. Habitat evaluation studies of critical salmon spawning areas in the Yukon River where population monitoring occurs provide a unique opportunity to evaluate how salmon populations may respond to shifting habitat mosaics resulting from climate change Capacity building would be improved, if investigators are successful in promoting local involvement with the project. The investigator is capable of successfully accomplishing the objectives of the project.

Project Number:	10-209
Project Title:	Yukon Delta Bering Cisco Mixed-stock Analysis
Geographic Region:	Yukon
Information Type:	Stock Status and Trends
Principal Investigators:	Randy J. Brown, UFWS Fairbanks Field Office
	Jeffry Olsen, Ora Schlei and John Wenburg, USFWS, Conservation Genetics Lab
Co-Investigators:	Larry DuBois, Alaska Department of Fish and Game (ADFG)
	Kevin Schaberg, ADFG
	Mike Thalhauser, Kuskokwim Native Association,
	Richard Yanusz, ADFG
	Stan Zuray, Rapids Research Station

Cost: **2010:** $69,361* **2011:** $39,589 **2012:** $22,181 **2013:** $13,871

*The budget for 2010 is dedicated almost entirely to obtaining stock-specific genetic samples and developing an effective baseline. If the genetic baseline does not provide enough resolution to discriminate among stocks, funds for 2011-2013 will not be necessary.

Recommendation: Fund

Issue

Bering cisco *Coregonus laurettae* are anadromous salmonids with known spawning populations only in the Yukon, Kuskokwim, and Susitna rivers in Alaska. Rearing Bering cisco are common in the coastal lagoons and estuaries of western Alaska, from Kuskokwim Bay to Prudhoe Bay, where they are actively harvested in subsistence fisheries, and are present in similar habitats in Cook Inlet and the south shore of the Alaska Peninsula. All coastal rearing Bering cisco are thought to be members of one of the three known populations. A commercial fishery for Bering cisco has been initiated in the lower Yukon River and the harvest is being marketed as a smoked fish product in New York City. The fishery is limited to an annual harvest of about 4,500 kg, which for Bering cisco amounts to approximately 10,000 fish. A much larger allocation has been requested, suggesting that the fishery would expand if permitted to do so. Yukon River Bering cisco appear to be quite abundant relative to other coregonid species, based on a mainstem index of relative abundance, and may be capable of sustaining substantial harvests. However, there are no similar data for Bering cisco in the Kuskokwim or Susitna River populations. If the Kuskokwim population is small and the commercial harvest is composed of a large fraction of Kuskokwim origin fish, which is possible, particularly for harvests taking place south of the Yukon River mouth, increasing the allowable harvest could be detrimental to that stock. We propose to develop a genetic baseline for Bering cisco, which would allow us to determine the relative contributions from Yukon, Kuskokwim, and Susitna River Bering cisco stocks in mixture samples, which may help us direct fishery efforts to minimize harvest of weak or unknown stocks and allocate stock assessment activities where they are most needed.

Objectives

1) Develop genetic markers for Bering cisco.

2) Develop a genetic baseline characterizing the Yukon, Kuskokwim, and Susitna spawning aggregations.

3) Use genetic mixed-stock analysis (MSA) to estimate the contributions of baseline populations to the Yukon Delta commercial harvest during 2010, 2011, and 2012.

Methods

Genetic tissue collections—Stock specific collections of Bering cisco genetic material will be collected from the Yukon, Kuskokwim, and Susitna rivers during 2010.

Commercial fishery collections—Genetic material will be collected from the commercial harvest during 2010 through 2012, providing three years of material for mixed stock analysis.

Genetics analyses—We will use the stock specific collections of Bering cisco genetic material to develop and test genetic baselines capable of discriminating among stocks. Assuming this is successful, we will then conduct mixed-stock analyses on the annual collections of genetic samples from the commercial fishery to estimate the proportional contributions of the known stocks.

Partnerships and Capacity Building

The baseline sampling in the Yukon and Kuskokwim rivers depends heavily on the efforts of rural residents and organizations. Stan Zuray, who runs the Rapids fishwheel sampling organization, will lead the sampling efforts on the Yukon River. Stan runs a fisheries education program for youth from Tanana each summer and will be involving these young people in the genetic sampling for Bering cisco at the site. Mike Thalhauser, the partner's biologist with Kuskokwim Native Organization, will be conducting the genetic sample collections from the Bering cisco spawning area on the Kuskokwim River. In his budget he has included funds for two local hires to assist him. Genetics projects require samples with very specific qualities and these individuals are capable of involving their respective communities and obtaining high quality samples for this project.

Justification

This proposal addresses information needs not included in the request for proposals. However, growing concerns regarding expanding commercial fisheries on a largely unstudied species and the potential for negative impacts on the fish stocks as well as subsistence fisheries provide a compelling justification for recommending funding. There is a clearly defined Federal subsistence linkage, the study design concept appears technically sound and the investigators are very capable. A logical progression of data collection and analysis is proposed leading to likelihood of a successful outcome. Investigators developed an investigation plan that (as recommended by the TRC) defined two phases for this study. During the first phase, genetic stock markers would be developed and tested using baseline genetic samples collected from spawning stocks in each of the three drainages that potentially could be contributing to the Yukon Delta commercial fisheries. The second phase would address the analysis of the mixed stock samples collected in 2010 as well as collection and analysis of mixed stock samples obtained in 2011 and 2012. If development of a stock identification model does not provide adequate resolution, funding for 2011-2013 will be withdrawn.

Project Number:	10-250
Project Title:	Yukon Climate Change Impacts on Subsistence Fisheries
Geographic Region:	Yukon
Information Type:	Harvest Monitoring and Traditional Ecological Knowledge
Principal Investigator:	David Andersen, Research North
Co-Investigator:	Caroline Brown, ADF&G, Division of Subsistence

Cost: **2010:** $78,291 **2011:** $59,587 **2012:** $31,945

Recommendation: Fund

Issue

Comments from Yukon River subsistence users are beginning to identify a suite of environmental changes attributed to climate change that impact fish, fish habitats, and fishing activities. Observations include the drying-up of wetland areas, lakes, and waterways, as well as changes in weather patterns, which in turn affect river levels and average dates of freeze-up and break-up. What is currently needed is a directed, systematic, drainage-wide effort to collect and understand these changes and their impacts. Traditional Ecological Knowledge (TEK) is particularly well suited for identifying environmental changes attributable to climate change at the local and regional level. Understanding the potential impacts of climate change on landscapes, wildlife, and subsistence users is important for Federal managers in order for them to carry out the mandates for which the various conservation units were established and to build flexibility into formal management structures to address a changing environment.

Objectives

1. Collect and catalogue TEK observations from local residents to produce a drainage-wide portrait of climate and environmental change, emphasizing those that are related to subsistence fisheries.
2. Synthesize existing data related to the relationships between climate/environmental change and subsistence fisheries in the Yukon River drainage, including existing reports, Regional Advisory Council minutes, and other archival sources.
3. Contribute to local capacity building by utilizing a framework of community involvement in research.
4. Provide recommendations on how or if these observed impacts may be mitigated or addressed through management scenarios.

Methods

Study communities include: Grayling, Nulato, Koyukuk, Allakaket, Fort Yukon, and Northway. Study communities have been selected for their proximity to Federal lands/waters, comments from previous studies indicating potential climate change impacts, and the presence of particularly knowledgeable key respondents known to the principal investigators. Similar data is also being collected by C. Brown in Emmonak under a separately funded project (Bering Sea Integrated Ecosystem Research Program) and results will be used to enhance the drainage-wide perspective of this project. The broad topic of climate change will be examined through a combination of archival sources, focused key respondent interviews with life-long residents of the Yukon River drainage, and a short climate change observation survey implemented with a larger sample of fishermen in each community.

Partnerships and Capacity Building

The principal investigators will build on earlier research efforts to contribute capacity building in study communities through research partnerships with local tribal or village councils in the identified study communities and will seek to hire local project assistants or community partners to help select key respondents, assist the principal investigator in all aspects of fieldwork, and administer the short observational survey. Investigators have also consulted with Dr. Carothers regarding her research proposal on the same topic in Northwest Alaska (OSM #10-125). Should both projects be funded, investigators from both projects will strive to work together in collecting comparable data sets for analysis that will facilitate inter-regional comparisons of climate change observations as they relate to subsistence fisheries.

Justification

This is a well written, thoughtful investigation plan that specifically addresses critical aspects of harvest monitoring/traditional ecological knowledge research: research topics directly from subsistence users and management applications relevant to addressing climate related changes in subsistence fisheries. The researchers' past record of thoughtful, well written, well researched and concise reports makes this a compelling proposal. Investigators have addressed issues raised in the proposal review.

Project Number:	10-300
Project Title:	Kanektok and Goodnews Rivers Salmon Run Assessments
Geographic Area:	Kuskokwim
Information Type:	Stock Status and Trends
Principal Investigator:	Jeff Estensen, ADF&G Division of Commercial Fisheries
Co-Investigators:	Edward Mark, Native Village of Kwinhagak
	Mark Lisac, USFWS Togiak National Wildlife Refuge

Cost: **2010:** $187,593 **2011:** $171,467 **2012:** $184,113 **2013:** $145,916

Recommendation: Fund

Issue

This proposal will fund the operations of two resistance-board weirs currently utilized on the Kanektok and Goodnews Rivers (funding here is requested to extend the operational period for the Goodnews River weir to better estimate coho salmon stocks). Both of these projects estimate all five species of salmon found in Alaska, as well as, Dolly Varden. Escapement information and biological data collected at these projects are valuable for setting escapement objectives, determining run timing, assessing the age structure of the returns, and enumerating adult salmon spawners.

Objectives

1. Estimate daily and annual total passage of Chinook, chum, sockeye, and coho salmon, and Dolly Varden through the Kanektok and Middle Fork Goodnews River weirs.
2. Describe the run-timing or proportional daily passage of Kanektok River Chinook, chum, sockeye, and coho salmon and Middle Fork Goodnews River coho salmon.
3. Estimate the sex, age, and length composition of Kanektok River Chinook, chum, sockeye, and coho salmon escapements and Middle Fork Goodnews River coho salmon escapement such that simultaneous 90% confidence intervals have maximum width of 0.20.
4. Monitor environmental variables at the project sites such as relative water level, discharge rate, and water temperature.

Methods

A resistance-board weir will be installed in the Kanektok and Goodnews Rivers to estimate passage of the five species of salmon found in Alaska and Dolly Varden. The projects will also act as a platform for the collection of biological samples (age-sex-length, genetics, scales, etc.). This information will be used to assess the returns to these systems.

Partnerships and Capacity Building

Goodnews weir will be staffed by two ADF&G Fish and Wildlife Technicians and one local hire USFWS Fisheries Technician. The Kanektok River weir is operated cooperatively by ADF&G, NVK, and USFWS, TNWR. Regular consultations between ADF&G, NVK, USFWS, CVRF and local stake holders will occur throughout the year to coordinate logistics, discuss results, and exchange ideas.

Justification

The Goodnews and Kanektok rivers salmon run assessment projects are well-established and successful monitoring projects that provide the primary escapement estimates and run strength data for Chinook, sockeye, chum and coho salmon in the Goodnews and Kanektok rivers; information utilized to ensure sustainability of Kuskokwim Bay subsistence fisheries and to conserve fisheries stocks. These projects also serve as important platforms for ongoing Dolly Varden char research conducted by staff of the Togiak NWR.

The investigators have the expertise and experience to conduct the proposed work and they have consistently met performance and other reporting requirements. There is a strong, cooperative partnership among the local, State and Federal implementing agencies.

Project Number: 10-303
Project Title: Kuskokwim Salmon Age-Sex-Length Assessment
Geographic Region: Kuskokwim
Information Type: Stock Status and Trends
Principle Investigator: Christopher A. Shelden, ADF&G Division of Commercial Fisheries
Co-Investigator: Douglas B. Molyneaux, ADF&G Division of Commercial Fisheries

Cost: **2010:** $108,735 **2011:** $112,724 **2012:** $116,954 **2013:** $121,380

Recommendation: Fund

Issue

The product of this project is an annual catalog of the age, sex, and length (ASL) composition of harvests and escapements of Kuskokwim Area Chinook, chum, sockeye, and coho salmon, which addresses one of the priority information needs identified in the 2010 Request for Proposals: to collect data leading to development of reliable estimates of abundance, run timing, stock structure, productivity, and carrying capacity of salmon stocks. Long-term ASL datasets are critical for developing tools and assessments that improve the certainty and effectiveness of fishery management decisions; e.g. brood year tables for assessment of annual salmon productivity and forecasting future run abundance, and detecting population trends such as changing proportions of male/female ratios, changes in age-sex class structure, changes in size-at-age, assessing effects of harvest selectivity and the general quality of escapements, and identifying conservation concerns.

This project currently supports seven OSM existing and proposed projects (Table 1) and several additional projects funded by other means. While these grants include sufficient funds for collecting samples, they do not generally include funding for processing, compiling, and analyzing samples.

Table 1. FRMP funded projects that are currently funded, or being proposed for continuation funds, that are integrated with the *Kuskokwim Salmon Age-Sex-Length Assessment* project 2010.

Project #	Project Title
07-304	Tatlawiksuk River weir salmon monitoring and assessment (requesting continuation in 2010)
07-305	Kanektok and Goodnews River weirs salmon monitoring and assessment (requesting continuation in 2010)
07-306	Kwethluk River Weir Salmon Monitoring and Assessment (requesting continuation in 2010)
07-307	Tuluksak River Weir Salmon Monitoring and Assessment (requesting continuation in 2010)
08-302	Age, sex, and length composition of lower Kuskokwim River subsistence Chinook salmon harvests
08-303	George River weir salmon monitoring and assessment
08-304	Takotna River weir salmon monitoring and assessment
08-351	Tuluksak Subsistence Chinook ASL

Objectives

Process, compile, and analyze salmon scale, sex, and length samples collected in 2010, 2011, 2012, and 2013 from Kuskokwim Region subsistence and commercial fisheries, escapement, and other projects.

Methods

Participants will deliver salmon ASL samples to the Principle Investigator. Samples will be taken from subsistence and commercial fisheries, and stock status and trends projects operated by various Federal, State, and Tribal groups. Salmon scales will be manually processed and aged, and ASL data will be compiled, digitized, and processed to provide summaries of harvests and escapements partitioned into age, sex, and length categories. A local hire Fish and Wildlife Technician will assist with ASL processing during the summer months. Summary information will be provided to project leaders, participating samplers, other investigators, and the public.

Partnership/Capacity Building

This project is integrated into several FIS funded projects (Table 1). Organizations that will directly benefit from the project include: ADF&G Commercial Fisheries Division, ADF&G Sport Fish Division, ADF&G Subsistence Division, Association of Village Council Presidents, Kuskokwim Native Association, Organized Village of Kwethluk Native Village of Kwinhagak, Orutsararmiut Native Council, Takotna Tribal Council, Tuluksak Traditional Council, ADF&G (Commercial Fisheries and Sport Fish divisions), and U.S. Fish and Wildlife Service (KFWRFO, Yukon Delta NWR, and Togiak NWR). Plans are also under development for Coastal Villages Seafood's (CVS) and ADF&G to partner starting in 2009 to provide ASL samples from Kuskokwim Area commercial fisheries. It is intended for CVS to fund and hire commercial samplers to work at their new seafood processing plant in Platinum. Samplers are to be hired locally and be trained by ADF&G staff.

Justification

The proposed work addresses an important research and monitoring priority by supporting standardization and quality control for the collection, analysis and documentation of salmon age, sex and length composition. This information is utilized to 1) monitor sex, age and size composition of commercial and subsistence fisheries harvests and escapement; 2) develop brood tables to assess management actions, 3) develop run strength outlooks, and 4) describe spawner recruit relationships. The investigators have the expertise and experience to conduct the proposed work. Reporting has been timely and complete.

Project Number:	10-304
Project Title:	Tatlawiksuk River Salmon Assessment
Geographic Region:	Kuskokwim
Information Type:	Stock Status and Trends
Principle Investigator:	Christopher A. Shelden, ADF&G Division of Commercial Fisheries
Co-Investigators:	Michael Thalhauser, Kuskokwim Native Association, Douglas B. Molyneaux, ADF&G Division of Commercial Fisheries

Cost: **2010:** $198,589 **2011:** $184,631 **2012:** $192,326 **2013:** $200,419

Recommendation: Fund

Issue

Tatlawiksuk River salmon contribute to subsistence, commercial, and recreational fisheries within the Yukon Delta National Wildlife Refuge. The Tatlawiksuk River run assessment project is one of several projects utilized to develop reliable estimates of abundance, run timing, stock structure, productivity, and carrying capacity of salmon stocks over a broad geographic scale in the Kuskokwim Region (Area). The project provides fundamental escapement information necessary to facilitate inseason management decisions and to assess trends in salmon populations. This project is also an essential platform for conducting several other projects. This project also incorporates substantial capacity building and outreach components.

Salmon escapements from this project have been monitored successfully 9 out of 11 years since 1998. Information from this project has become integrated into the annual management process, both by providing insights into escapement and stock specific run timing through the fishery. The escapement age, sex, and length information collected at Tatlawiksuk River provides part of the context needed to assess the impacts of subsistence harvest practices (*Age, Sex, and Length Composition of Lower Kuskokwim River Subsistence Chinook Harvest,* FIS #08-302).

Objectives

1. Determine daily and total annual Chinook, chum, and coho salmon escapements from 15 June to 20 September;
2. Estimate age-sex-length (ASL) composition of annual Chinook, chum, and coho salmon escapements to the Tatlawiksuk River such that 95% confidence intervals of age composition will be no wider than ±10% (a=0.05, d=0.10);
3. Serve as a platform to facilitate current and future fisheries research projects.

Methods

Investigators will install a resistance board weir on the lower Tatlawiksuk River. Passage gates in the weir will allow fish to be identified by species and counted as they pass upstream and a live trap will be used to sample salmon for scales, and sex and length information; and for tag recovery for AYK SSI funded projects *Kuskokwim River coho salmon investigations,* and *Kuskokwim River Sockeye Salmon Investigations*. ASL data is processed post-season under *Kuskokwim Salmon ASL Assessment Project* (FIS proposed project #10-303). Investigators will also record daily water temperature, water level, and

weather conditions, and maintain equipment in support of *Temperature Monitoring* FIS #08-701. A local technician hired by KNA will operate the project along with a lead crew member provided by ADF&G. The project will serve as a platform for several research initiatives including those listed above and genetic and otolith collection for stock identification. Potential exists for this project to provide a platform for future studies as well.

Partnership/Capacity Building

KNA and ADF&G operate the Tatlawiksuk River weir jointly at the Partnership Level. Planning, operation, and data analysis associated with the weir is done through an interactive feedback between staff from both organizations, including the KNA fishery biologist who is employed through the OSM Fishery Partners Program. KNA has a proven track record of effective involvement in weir operation. Past interactions between KNA, ADF&G/CF, and local communities has created a high level of public awareness about salmon management and stock status, and has fostered career interests in fisheries through the student internship program.

Justification

The Tatlawiksuk River weir is a well-established and successful cooperative project operated by KNA and ADF&G. The project provides valuable escapement and biological sampling data for salmon stocks in an important subbasin of the Kuskokwim River, promotes local involvement, and develops the capacity of KNA to monitor fish populations. The investigators have the expertise and experience to conduct the proposed work and have consistently met performance and reporting requirements. There is a strong partnership between KNA and ADF&G.

Project Number:	10-305
Project Title:	Kuskokwim River Sheefish Spawning Distribution and Timing
Geographic Region:	Kuskokwim
Information Type:	Stock Status and Trends
Principle Investigator:	Lisa Stuby, ADF&G Division of Sport Fish

Cost: **2010:** $54,245 **2011:** $52,532

Recommendation: Fund

Issue

Sheefish are a highly migratory, long-lived species that migrate throughout most of the Kuskokwim River drainage and are important to both subsistence and sport fishers. A three-year radiotelemetry study (06-305) was initiated during 2007 on sheefish in the Kuskokwim River drainage. Management of the Kuskokwim River sheefish population for long-term sustainability requires a better understanding of their life history. The information gathered from this study can be utilized to design future studies to investigate the population dynamics of specific spawning stocks, stock abundance, and stock compositions of harvests. In addition, a baseline understanding of migratory timing and seasonal distributions will be important for understanding changes that may occur as a result of habitat perturbations. The majority of the 119 radio transmitters already implanted are expected to continue working through the fall of 2011. An additional two years of tracking the radio-tagged sheefish will provide refined information on spawning locations, migratory timing to spawning, overwintering, and feeding areas, and life history traits such as frequency of spawning and fidelity to spawning areas.

Objectives

The main objective for the continuation of this project is to:

1. document spawning stocks and spawning locations of sheefish in the Kuskokwim River drainage.
2. Secondary objectives of this project are to:
3. determine the migratory timing of sheefish to their spawning, overwintering, and feeding areas;
4. identify specific summer feeding areas used by known spawning stocks;
5. travel to areas identified during radio tracking surveys as spawning areas and sample a minimum of sheefish from each area to assess spawning readiness to verify spawning is occurring at these areas;
6. collect tissue samples from each sheefish captured at spawning areas for future genetic stock identification analysis; and,
7. continue to assist with the whitefish telemetry project (06-303) by incorporating whitefish frequencies during aerial tracking and in the stationary tracking stations.
8. record and describe habitat characteristics such as channel characteristics, water temperature, spawning substrate, flow, depth, and/or turbidity while visiting spawning areas to sample sheefish.

Methods

Stationary tracking stations located between Aniak and the mouth of Big River will track movements and timing of the radio-tagged sheefish during their upriver and downriver migrations. Aerial surveys from small aircraft will be conducted during late June throughout the Kuskokwim River drainage to locate sheefish at their summer feeding areas, and during late September and early October to locate sheefish at their spawning areas. Sheefish are iteroperous, but most do not spawn every year, especially females. Additional aerial surveys of radio-tagged sheefish during fall 2010 and 2011 will give greater insight into the spawning frequency of sheefish in the Kuskokwim River drainage and may lead to identification of additional spawning areas.

Sheefish will be sampled for spawning readiness in the Big River, Middle Fork, Highpower Creek, and any other areas with suspected spawning activity to confirm that spawning is occurring there. A minimum of 10 sheefish will be captured from each site using seines and hook and line gear. Spawning readiness will be assessed from either extrusion of gametes or through visual inspection of the gonads. No more than 10 sheefish will be sacrificed at any spawning area, and if the population of sheefish at the spawning areas appears to be small (100–200 fish), then less than 10 fish will be sampled. Gonadosomatic indices (GSI) will be calculated from each sheefish For every sheefish sampled, lengths will be taken, otoliths will be removed for later age analysis, and a fin clip will be collected and archived for future genetic analysis.

Few studies have been performed to classify and/or characterize sheefish spawning habitats, but it has been noted that sheefish require very specific habitats to spawn. We will note habitat characteristics in spawning areas such as water temperature, channel characteristics, spawning substrate, flow, depth, turbidity, and/or other pertinent habitat characteristics. These measurements will be taken at the same time as fish are sampled to determine spawning readiness.

Partnerships and Capacity Building

This study has been conducted cooperatively with Ken Harper's (USFWS) study, "Telemetry studies of humpback and broad whitefish in the lower Kuskokwim River (06-303)". Project staff has helped set up, download, and maintain Ken's stationary tracking stations and have included tracking whitefish during aerial surveys for sheefish. The Kuskokwim Native Association (KNA) will assist in maintaining the stationary tracking stations and provide a college intern(s) to assist with upriver fall sheefish sampling on the spawning grounds, habitat analysis of upriver sheefish spawning areas, and tracking radio-tagged fish by small aircraft. This project has been discussed with Kuskokwim River residents, the McGrath Native Council, representatives of KNA, and McGrath, Takotna, Nikolai, and Telida (MTNT, Limited). In addition, project updates will be given on KSKO and KYUK radios, Fisheries Awareness Information and Responsibility (FAIR) forum, and at the Kuskokwim Area staff meetings.

Justification

The requested two-year extension of Project 06-305; a well planned, designed and executed project, addresses a priority information need identified in the 2006 request for proposals and will maximize information available from sheefish already radio-tagged. The majority of the 119 transmitter tags allotted for this study were deployed during May and June 2008. These tags have a 3-year guaranteed operating life and, therefore, are expected to continue working through the 2011 field season. Two additional years of tracking the radio-tagged fish will provide more and refined information on spawning locations, migratory timing to spawning, overwintering and feeding areas, and life history traits such as frequency of spawning and fidelity to spawning areas.

Project Number:	10-306
Project Title:	Kwethluk River Salmon
Geographic Area:	Kuskokwim
Information Type:	Stock Status and Trends
Principal Investigator:	Ken Harper, USFWS Kenai Field Office
Co-Investigators:	Steve J. Miller, USFWS Kenai Field Office
	Herman Evan, Organized Village of Kwethluk

Cost: **2010:** $207,131 **2011:** $226,795 **2012:** $221,276 **2013:** $224,342

Recommendation: Fund

Issue

Kwethluk River salmon contribute to subsistence, commercial and recreational fisheries within the Yukon Delta National Wildlife Refuge. Fishery managers need salmon escapement data from representative rivers such as the Kwethluk River that contribute to these complex mixed stock fisheries. This project provides fundamental escapement information necessary to facilitate in-season management decisions and to assess trends in salmon populations. Salmon escapements to the Kwethluk River weir have been monitored successfully during 1992 and 2000–2009. Information from this project has become integrated into the annual management process, by providing insights into escapements in a lower Kuskokwim River tributary. The escapement, age, sex, and length information collected at Kwethluk River provides part of the context needed to assess the impacts of subsistence harvest practices.

Objectives

1. Estimate the daily passage and characterize the run timing of Chinook, chum, coho, sockeye, and pink salmon and resident fish species through the weir.
2. Estimate the weekly sex and age composition of Chinook, chum, and coho salmon such that the simultaneous 90% confidence intervals have a maximum width of 0.20.
3. Estimate the mean length of Chinook, chum and coho salmon by sex and age.
4. Estimate the number of Chinook, chum, coho, sockeye, and pink salmon carcasses that wash down onto the weir each day.

Methods

Investigators will install and operate a resistance board weir on the Kwethluk River 88 river kilometers (rkm) upstream from the confluence with the Kuskokwim River. The weir will be operated between June 15 and September 10 over a four year period beginning in 2010. The weir will be installed in April each year immediately after ice out and prior to spring floods. A helicopter will be used to transport personnel and gear to the weir site during this time to begin weir installation. Passage chutes in the weir will allow fish to be counted and identified to species as they pass upstream. A live trap will be used to sample salmon for scales, sex and length information.

Partnership/Collaboration

The Kenai Fish and Wildlife Field Office (KFWFO) and the Organized Village of Kwethluk (OVK) have cooperatively operated the Kwethluk River weir since 2000. OVK provides personnel for the weir and administrative oversight to these employees. Capacity building will continue, as the KFWFO mentors and trains residents hired by the OVK to work at the weir.

Justification

The Kwethluk River salmon run assessment project is well-established and successful and provides the primary escapement and run strength data used to ensure sustainability of subsistence fisheries in the Kwethluk River on the Yukon Delta NWR. These salmon stocks are harvested by a large lower river subsistence fishery, and pass through a commercial fishing district between the Kuskokwim and the Kwethluk River mouths.

The investigators have successfully operated the weir for nine seasons; 2010 would be the eleventh year of operation. Reports for this project have been professionally written and submitted in a timely manner.

This project has the potential to become a full partnership between the USFWS and the Native Village of Kwethluk.

Project Number:	10-307
Project Title:	Tuluksak River Salmon Assessment
Geographic Area:	Kuskokwim
Information Type:	Stock Status and Trends
Principal Investigator:	Ken Harper, USFWS Kenai Field Office
Co-Investigator(s):	Steve J. Miller, USFWS Kenai Office
	George Lamont, Tuluksak Native Community

Cost: **2010**: $205,449 **2011**: $150,538 **2012**: $167,207 **2013**: $157,800

Recommendation: Fund

Issue

Tuluksak River salmon contribute to subsistence, commercial and recreational fisheries within the Yukon Delta National Wildlife Refuge. Fishery managers need salmon escapement data from representative rivers such as the Tuluksak River that contribute to these complex mixed stock fisheries. This project provides fundamental escapement information necessary to facilitate in-season management decisions and to assess trends in salmon populations. Salmon escapements to the Tuluksak River weir have been monitored successfully during 1991–1994 and 2001–2009. Information from this project has become integrated into the annual management process, by providing insights into escapements in a lower Kuskokwim River tributary. The escapement age, sex, and length information collected at Tuluksak River provides part of the context needed to assess the impacts of subsistence harvest practices. In addition, renewed interest in extraction of mineral resources within the drainage heightens the need for continued monitoring of Tuluksak River salmon escapements.

Objectives

1. Estimate the daily passage and characterize the run timing of Chinook, chum, coho, sockeye, and pink salmon and resident fish species through the weir.
2. Estimate the weekly sex and age composition of Chinook, chum, and coho salmon such that the simultaneous 90% confidence intervals have a maximum width of 0.20.
3. Estimate the mean length of Chinook, chum and coho salmon by sex and age.
4. Estimate the number of Chinook, chum, coho, sockeye, and pink salmon carcasses that wash down onto the weir each day.

Methods

Investigators will install a resistance board weir on the Tuluksak River 49 river kilometers (rkm) upstream from the confluence with the Kuskokwim River. The weir will be operated between June 15 and September 10 over a four year period beginning in 2010. The weir will use the same configuration as in past years except that an underwater video system will be installed upstream of the fish trap to enumerate salmon. Advantages in using video enumeration include unobstructed fish passage, significant long-term cost savings, more accurate escapement estimates, and perhaps most importantly, operations can continue during high flows and turbid water conditions. A live trap will be used to sample salmon for scales, sex and length information.

Partnership/Collaboration

The Kenai Fish and Wildlife Field Office (KFWFO) and Tuluksak Native Community (TNC) have cooperatively operated the Tuluksak River weir since 2001. TNC provides personnel for the weir and administrative oversight to these employees. Capacity building will continue, as the KFWFO mentors and trains residents hired by the TNC to work at the weir.

Justification

The Tuluksak River salmon run assessment project is a well-established and successful long-term monitoring project that provides escapement and run strength data utilized to ensure sustainability of subsistence fisheries in the Yukon Delta NWR and conserve fisheries stocks in the Kuskokwim River.

The investigators have successfully operated the weir at its present location for thirteen seasons; 2010 would be the fourteenth year of operation. Reports for this project have been professionally written and submitted in a timely manner.

This project has the potential to become a full partnership between the USFWS and the Tuluksak Native Community.

Project Number:	10-352
Project Title:	Kuskokwim Salmon Postseason Harvest Monitoring
Geographic Region:	Kuskokwim
Information Type:	Harvest Monitoring/Traditional Ecological Knowledge
Principal Investigator:	Jeff Estensen, ADF&G Division of Commercial Fisheries
Co-Investigators:	Holly Carroll, ADF&G Division of Commercial Fisheries
	Greg Roczicka, Orutsararmiut Native Council
	Michael Thalhauser, Kuskokwim Native Association

Cost: **2010** $100,896 **2011** $87,771 **2012** $91,225 **2013** $82,337

Recommendation: Fund

Issue

This four-year project funds the Kuskokwim Subsistence Salmon Harvest Monitoring Program, which ADF&G has implemented since 1960. Residents of the Kuskokwim Fisheries Management Area harvest five species of salmon for subsistence uses within the boundaries of the Yukon Delta and the Togiak national wildlife refuges. The Kuskokwim Area subsistence salmon fishery is one of the largest in the state in terms of amounts harvested. From June through October, the movement of families from permanent winter residences to summer fish camps situated along rivers and sloughs continues to be very important in annual subsistence harvest efforts. The Kuskokwim Subsistence Salmon Harvest Monitoring Program has estimated the harvest primarily through household surveys, and to a lesser extent harvest calendars and post card surveys. This information has been critical in helping ADF&G, FWS, the Alaska Board of Fisheries, and the Federal Subsistence Board to identify the amounts of salmon reasonably necessary for subsistence uses and to provide for continued customary and traditional uses of salmon throughout the region. Since 1999, ADF&G's Kuskokwim Subsistence Salmon Harvest Monitoring Program has partnered with Orutsararmiut Native Council in Bethel and since 2002 with Kuskokwim Native Association in Aniak. OSM has contributed funds to the harvest monitoring program through projects 00-009, 01-024, 02-036, 04-359, 05-356, and 08-352. This is a request to continue OSM funding.

Objectives

1. Estimate the number of Chinook salmon, chum salmon, sockeye salmon, and coho salmon harvested for subsistence uses by residents of Bethel;
2. Estimate the number of Chinook salmon, chum salmon, sockeye salmon, and coho salmon harvested for subsistence uses by residents of Aniak; and
3. Place the Bethel and Aniak estimates within the context of the estimate for the entire Kuskokwim Management Area

Methods

Household surveys will be conducted annually between October and November with Kuskokwim River drainage communities. The subsistence harvest of Bethel residents will be estimated by employing a simple random sample survey method. The subsistence harvests of the remaining 37 communities will be estimated by employing either census (100% survey) or stratified sampling survey methods, depending on

community size. In addition to household harvest surveys, subsistence salmon harvest calendars will be distributed by mass mailing to all known households in the Kuskokwim Area in spring time each year.

Partnership/Capacity Building

This project includes a strong and proven partnership between the State, Orutsararmiut Native Council, and Kuskokwim Native Association. It will strengthen the capacity of the organizations to carry out subsistence fisheries harvest assessment projects in the region. This collaborative effort will result in a better understanding of the subsistence fisheries involvement by residents in the region.

Justification

This four-year project funds the Kuskokwim Subsistence Salmon Harvest Monitoring Program, which ADF&G has implemented since 1960. The overall goal of the project is to estimate the annual harvest of salmon for subsistence purposes, which is of high importance to both State and Federal fisheries management. The project includes proven partnerships between ADF&G, Kuskokwim Native Association, and Orutsararmiut Native Council. The technical and scientific merit and the investigator ability and resources are highly rated. OSM has contributed funds to the project since 2000, and this is a request to continue OSM funding. The State is contributing over 50% of project funds.

Project Number:	10-353
Project Title:	Kuskokwim Salmon Working Group Support
Geographic Region:	Kuskokwim
Information Type:	Harvest Monitoring/Traditional Ecological Knowledge
Principal Investigator:	Jeff Estensen, ADF&G Division of Commercial Fisheries.
Co-Investigator:	Holly Carroll, ADF&G Division of Commercial Fisheries.

Cost: **2010:** $44,974 **2011:** $45,169 **2012:** $46,740 **2013:** $45,336

Recommendation: Fund

Issue

This four-year project funds the Kuskokwim River Salmon Management Working Group, formed in 1988 at the direction of the Alaska Board of Fisheries in response to requests from stakeholders along the Kuskokwim River. Stakeholders were seeking a more active role in the management of salmon fisheries. Since then, the Working Group has become increasingly active in the preseason, inseason, and postseason management of the Kuskokwim River drainage subsistence, commercial, and sport salmon fisheries. In 2001, the Working Group modified its charter in order to more effectively address the needs of the Federal Subsistence Management Program by including members of the Coordinating Fisheries Committee of the Yukon Kuskokwim Delta and the Western Interior regional advisory councils. The Working Group provides information that assists ADF&G and FWS to implement the subsistence priority in these fisheries. OSM has contributed funds to the operation of the Working Group through projects 01-116 and 06-307 since 2001. This is a request to continue OSM funding.

Objectives

1. Provide inseason run assessment information to all parties participating in cooperative management of the Kuskokwim River subsistence salmon fishery.
2. Provide a forum for FWS, Regional Advisory Council members, ADF&G, and other participants of the cooperative management process to discuss inseason run assessment information and fishery management decisions affecting subsistence fisheries.
3. Provide an opportunity for participants in the cooperative management process to forecast and plan (preseason) and to summarize (postseason) the fishing season.
4. Report the discussion and decisions made during the cooperative management process.

Partnership/Capacity Building

This investigation plan demonstrates a high level of community involvement. The Working Group process has received attention as a successful model for cooperative management. Local subsistence users, Council members, and local fisheries representatives are given the opportunity to examine and discuss fisheries data as it is being collected and develop a recommendation that managers consider carefully.

Justification

This four-year project funds the Kuskokwim River Salmon Management Working Group. Formed in 1988, the Working Group is a successful model of cooperative management and serves as a public forum

for fisheries managers to meet with local users of the salmon resource. The subsistence salmon fishery of the Kuskokwim River is one of the largest in the state, and this project is of high strategic importance. The investigator ability and resources and the the partnership and capacity building components of the investigation plan are highly rated. OSM has contributed funds to the Working Group process since 2006, and this is a request to continue OSM funding. ADF&G is providing 50% of project funds.

Project Number:	10-354
Project Title:	Kuskokwim Salmon Inseason Harvest Monitoring
Geographic Region:	Kuskokwim
Information Type:	Harvest Monitoring/Traditional Ecological Knowledge
Principal Investigator:	Jeff Estensen, ADF&G Division of Commercial Fisheries
Co-Investigators:	Greg Roczicka, Orutsararmiut Native Council
	Doug Bue, ADF&G Division of Commercial Fisheries.

Cost: **2010:** $37,636 **2011:** $30,078 **2012:** $31,443 **2013:** $21,523

Recommendation: Fund

Issue

This four-year, collaborative project uses a questionnaire to survey participants in the subsistence salmon fishery in the vicinity of the community of Bethel. The methodology is designed to obtain inseason salmon harvest information to be used in combination with other information to assess Kuskokwim River salmon-run timing and abundance compared to previous years. The inseason monitoring program has been conducted annually since 2001. It provides information that assists ADF&G and FWS to implement the subsistence priority in Kuskokwim River fisheries. OSM has contributed funds to this ongoing investigation through projects 00-008, 01-023, 01-132, 01-225, 04-353, 05-307, and 06-306 since 2000. This is a request to continue OSM funding.

Objectives

1. Characterize salmon run timing and relative abundance in May, June, and July through weekly interviews with Bethel Area subsistence salmon fishers.
2. Characterize fishing activity and gear use through weekly interviews with Bethel Area subsistence salmon fishers in May, June, and July.
3. Build management capacity by providing local input into the management process for the subsistence salmon fishery in May, June, and July through the presentation of weekly summaries of interviews with Bethel Area subsistence salmon fishers at Kuskokwim River Salmon Management Working Group meetings
4. Build local capacity by providing cross training to an Orutsararmiut Native Council technician in other ADF&G and USFWS projects for up to two weeks.

Methods

Orutsararmiut technicians will conduct interviews with subsistence fishermen beginning May 15 and ending July 15. Interviews will begin Thursday of every subsistence-fishing period (Wednesday through Saturday) or week (when fishing seven days per week). The interviewer will ask questions in order to complete a two-page interview form. Interview responses will be entered into a spreadsheet and summarized across each calendar or weekly fishing period. Summary tables will be provided to ADF&G for distribution to FWS, Yukon Kuskokwim Delta and the Western Interior regional advisory council members, Kuskokwim River Salmon Management Working Group members, and the public at Working Group meetings. A brief report will be added to capture fishers' comments and concerns expressed during the interview.

Partnership/Capacity Building

Staff from Orutsararmiut Native Council will conduct this project in consultation with staff from ADF&G, Division of Commercial Fisheries. This (2010) will be the tenth year of subsistence interviews. Orutsararmiut staff responsible for the field work will be trained by the Orutsararmiut principal investigator. ADF&G CF staff will review forms for completeness and train Orutsararmiut staff to prepare weekly summaries. The Orutsararmiut project investigator will draft the performance report and coauthor the final report.

Justification

This four-year project uses a questionnaire to survey participants in the subsistence salmon fishery in the vicinity of the community of Bethel, providing inseason information to the Kuskokwim River Salmon Management Working Group and aiding in the management of the salmon fisheries in the Kuskokwim Area. Although not rigorous technically, the project is viewed as a high priority by fisheries managers and stakeholders in the region. This project provides a strong capacity building component. OSM has contributed funds to the project since 2000. This is a request to continue OSM funding. ADF&G is more than matching OSM's contribution to that agency.

Project Number:	10-401
Project Title:	Afognak Lake Sockeye Salmon Smolt and Adult Assessment
Geographic Area:	Southwest Alaska
Information Type:	Stock Status and Trends
Principal Investigator:	Robert T. Baer, ADF&G Division of Commercial Fisheries
Co-Investigators:	M. Birch Foster, ADF&G Division of Commercial Fisheries
	Heather Finkle, ADF&G Division of Commercial Fisheries

Cost: **2010:** $139,536 **2011:** $141,617 **2012:** $147,033 **2013:** $150,887

Recommendation: Fund

Issue

The investigators will continue to assess sockeye salmon *Oncorhynchus nerka* production at Afognak Lake in response to the declining adult runs that began in 2001 and have continued through 2008. In response to the declining runs, State and Federal managers closed subsistence fishing in early June during the 2002 season, and in-season closures have occurred in 2003, 2004, and 2007 in an attempt to achieve the escapement goal for sockeye salmon into Afognak Lake.

This project will continue the smolt and lake limnology investigations started in 2003 and ensure adult escapement monitoring and sampling continues for an additional four years to provide uninterrupted stock assessment information that is critical for in-season management of State and Federal subsistence fisheries. Newly introduced objectives will further evaluate the condition of juvenile sockeye salmon relative to their energy density and correlated to environmental factors. Additionally, the bioenergetics data will be modeled with paleolimnological and limnological data to help identify how exogenous factors such as climate change and volcanic ash fall affect juvenile salmon rearing.

Local user groups, represented by the Kodiak Regional Advisory Council, have determined that assessment and monitoring of Afognak Lake sockeye salmon to be their highest priority information need. This proposed investigation satisfies a *Priority Information Need* within the Southwest Region of Alaska as listed in the Office of Subsistence Management's 2010 Fisheries Resource Monitoring Program request for proposals. Data collected from this project will enable researchers to better identify what factors are controlling sockeye salmon production within the freshwater environment which will help refine the optimum and biological escapement goal and help improve pre-season run forecasts. This will allow managers to better manage for maximum sustainable yield and prevent unnecessary restrictions of State and Federal subsistence fisheries.

Objectives

1. Estimate the abundance, age composition, and average size of sockeye salmon smolt emigrating from Afognak Lake and adults escaping to Afognak Lake from 2010–2013.
2. Evaluate the effects of the water chemistry, nutrient status, and plankton production of Afognak Lake on the smolt production and future adult returns from 2010–2013.
3. Evaluate the condition of juvenile sockeye salmon relative to diet and energy density from 2010–2013.

4. Assess available historical fisheries and limnological data in relation to climate change effects upon completion of objectives 1–3.

Methods

An inclined-plane smolt trap will be installed in the Afognak River to capture a portion of the sockeye salmon smolt outmigration from Afognak Lake with mark-recapture techniques used to estimate the total smolt outmigration. Age, weight, and length data from sockeye salmon smolt will be used to estimate the age composition and average length, weight and condition factor by age of the outmigration. Limnology information, including water chemistry, nutrient, phytoplankton, zooplankton, temperature, dissolved oxygen, and light penetration data will be collected from Afognak Lake. Lake samples will be analyzed in Kodiak at the ADF&G limnology laboratory. Data obtained from limnological sampling will be used to identify habitat parameters necessary for modeling purposes. Diet and caloric energy assessments will be conducted on a portion of the lake-rearing juvenile sockeye salmon. Energy densities of juvenile sockeye salmon will be used in conjunction with diet and temperature data to construct a bioenergetics model to estimate and identify growth limitations associated with freshwater rearing. Following all data collection further modeling and assessment using recent smolt emigration data paired with bioenergetics modeling, paleolimnologcal analysis, nutrient-phytoplankton-zooplankton models, and spawner-recruit models will be used to help identify the impact climate changes have on fish species.

Partnerships and Capacity Building

ADF&G in collaboration with Afognak Native Corporation and Afognak Native Village will work together in an annual educational project designed to cross educate and train native student interns in fisheries management and research practices and ADF&G staff in subsistence harvesting methods and traditional culture. Student interns will be educated and trained in the importance on sustainable fisheries management and research practices on-site as they work side-by-side with ADF&G field technicians at the Afognak Lake field station. In turn ADF&G field staff will visit the nearby Dig Afognak Traditional Harvesting camp where they will learn from Elders and other subsistence gatherers the importance of subsistence foods for the Alutiiq people. Additionally all groups will participate in a communal subsistence salmon fishery within Afongak Bay where sockeye salmon will be harvested, processed, dried, and smoked in the traditional manner.

Justification

This project addresses a priority information need listed in the 2010 Request for Proposals, is technically sound, and is mostly a continuation of work successfully conducted since 2003. The investigators added new objectives concerning smolt caloric content, climate change effects, and adult escapement in addition to existing ones concerning smolt abundance and rearing conditions. The investigators have proven records of successfully conducting, administering, and completing other Fisheries Resource Monitoring Program projects. Although there are no local organizations willing or able to assume a leadership role in this project, the investigator has made excellent efforts to partner with local organizations and agencies and to enhance capacity building. A variety of training, learning, and education activities would occur by working with up to four student interns from Afognak Native Corporation as well as with all students participating in the Traditional Harvesting Camp conducted by Afognak Native Village as part of their Dig Afognak program. Requested annual costs to operate this project would be about $60,000 to $70,000 more per year than the annual budget provided for project 07-401 in 2009, and matching funds would also increase from 25% of the total cost of project 07-401 to 41% of the total cost of the 2010 project. Increased costs would mostly be due to the addition of three new project objectives, including partial funding of the adult weir that the State has operated since 1978. The Alaska Department of Fish

and Game would provide about 65% of the total funding needed to operate the weir over the four years of this project, which conforms to existing policy and funding guidelines that limit Fisheries Resource Monitoring Program funding to a maximum of 50% of the cost for a long-term project that can no longer be fully funded by an agency, if it provides information directly used for Federal subsistence fisheries management.

Project Number:	10-402
Project Title:	Togiak River Chinook Salmon Assessment
Geographic Region:	Southwest Alaska
Information Type:	Stock Status and Trends
Principal Investigator:	Cheryl Anderson, USFWS Anchorage Field Office
Co-Investigator(s):	Pat Walsh, Togiak National Wildlife Refuge Courtenay Carty, Bristol Bay Native Association Jason Dye, ADF&G Division of Sport Fish Tim Sands, ADF&G Division of Commercial Fisheries

Cost: **2010:** $241,342 **2011:** $203,713 **2012:** $210,132

Recommendation: Fund

Issue

Recent Chinook salmon Oncorhynchus tshawytscha production throughout the region, as well as much of Alaska is in decline. Chinook salmon are important components of valuable subsistence, sport, and commercial fisheries. Assessment of Chinook salmon escapements in the Togiak River is poor – escapements are assessed via aerial surveys which at best have large variability and have been conducted sporadically in recent years. Escapement estimates are calculated by expanding visual counts with correction factors. A comprehensive investigation of Chinook salmon abundance and distribution within the Togiak River watershed has never been accomplished. Aerial survey abundance estimates within the Togiak River watershed have not been verified with other methods, and the accuracy with which the observations index abundance is unknown. The investigators would build upon estimates of spawning distribution and run timing provided under Project 08-402 to include estimates of spawning abundance.

Objectives:

1. Estimate the proportion of Chinook salmon migrating past a weir on Gechiak Creek;
2. Estimate the abundance of Chinook salmon escaping into the Togiak River watershed such that the estimate will have a 90% probability of being within 25% of the true abundance;
3. Estimate the weekly age and sex composition of spawning Chinook salmon in Gechiak Creek, such that simultaneous 90% confidence intervals have a maximum width of 0.20;
4. Estimate the mean length of Chinook salmon by sex and age;
5. Document Chinook salmon spawning locations in the Togiak River watershed;
6. Evaluate the effectiveness of aerial spawning ground surveys for monitoring Chinook salmon abundance in the Togiak River watershed; and
7. Measure and document water temperature throughout the main stem and lower tributaries in the Togiak River watershed (BBNA).

Methods

The investigators will conduct a mark-recapture experiment to estimate the abundance of Chinook salmon in the Togiak River watershed using radio telemetry methods. Fish will be captured and marked with

radio transmitters of the lower 5 km in the mainstem Togiak River. The recapture event will consist of a fixed receiver station co-located with a floating weir on Gechiak Creek. Additional receiver stations will be placed at strategic locations within the watershed.

Partnerships and Capacity Building

BBNA will hire two technicians per year from the local villages, and provide logistical and administrative support. BBNA will be supply temperature data loggers to be deployed throughout the main stem Togiak River and in the lower reaches of the five major tributaries to monitor water temperatures. BBNA will compile and summarize water temperature data results as daily maximum, minimum, and mean. The information will be forwarded to the primary investigator for annual reporting.

Justification

This project addresses a priority information need listed in the 2010 Request for Proposals; project objectives are clearly written, many are quantifiable, and all are measurable; and the investigators have a proven record of successfully conducting, administering, and completing other Fisheries Resource Monitoring Program projects. This project would build upon work begun under project 08-402, which is providing information on Chinook salmon distribution and run timing needed to obtain reliable mark-recapture abundance estimates. Based on the first year of results from project 08-402, the current proposal would be able to provide accurate Chinook salmon abundance estimates over its three years of operation. The total estimated cost of the proposed work appears reasonable, and the investigators would be able to provide matching funds to cover about 44% of the total funding. While a local Alaska Native organization was listed as a co-investigator, capacity building was ranked as medium since this organization's role would be to provide local knowledge and local research assistants and to conduct activities involved with temperature monitoring. An additional research opportunity for Bristol Bay Native Association staff or interns would be to determine whether a relationship existed between Chinook salmon movements and water temperature. This analysis could be included in Objective 7, which currently only addresses measuring and documenting water temperatures. Upon completion of this project, the investigators should provide recommendations concerning the most reliable and cost effective method to use in obtaining future annual Chinook salmon abundance estimates for this system.

Project Number:	10-403
Project Title:	Buskin River Sockeye Salmon Adult Assessment
Geographic Area:	Southwest Alaska
Information Type:	Stock Status and Trends
Principal Investigator:	Donn Tracy, ADF&G Division of Sport Fish

Costs: **2010:** $ 90,600 **2011:** $ 93,000 **2012:** $ 95,000 **2013:** $ 96,800

Recommendation: Fund

Issue

Investigators will annually count the number and sample the age composition of sockeye salmon migrating into Buskin River drainage for inseason management of subsistence and other fisheries, and will evaluate and refine the Biological Escapement Goal. Investigators will also interview subsistence fishers to determine their residency demographics and historical participation in subsistence fisheries occurring within the Kodiak-Aleutians region. Lastly, genetics samples from the sockeye salmon subsistence harvest will be collected and analyzed to apportion run components comprising the total catch.

Objectives

1. Estimate the sockeye salmon escapement into Buskin Lake approximately from June 1 to August 1, and Louise/Catherine lakes tributary approximately from June 1 through August 31.
2. Estimate the age composition of the sockeye salmon run (combined subsistence harvest in the Chiniak Bay section and escapement) to Buskin Lake such that the estimates are within 5 percentage points of the true value 95% of the time.
3. Estimate the age composition of the sockeye salmon run (escapement) to Louise/Catherine lakes tributary such that the estimates are within 7.5 percentage points of the true value 95% of the time.
4. Estimate proportions through DNA analysis of the sockeye salmon subsistence harvest in the Buskin River Section of Chiniak Bay comprised of Buskin and Louise/Catherine lakes run components such that the estimates are within 7.5 percentage points of the true value 90% of the time.
5. Evaluate and, if necessary, refine the sockeye salmon Biological Escapement Goal on a triennial basis concurrent with the Alaska Board of Fisheries meeting cycle for Kodiak area finfisheries.
6. Document local residency of Buskin River sockeye salmon subsistence users and user preferences for areas traditionally fished.

Methods

Investigators will install a salmon counting weir on the Buskin River and Louise/Catherine lakes tributary to annually estimate the spawning escapement of sockeye salmon. Additionally, sockeye salmon will be sampled at the weirs and from the subsistence harvest for age, sex and length, providing estimates of the combined escapement and subsistence harvest by age within 25% of the true values 95% of the time. Also, samples for genetic stock identification collected from the subsistence harvest will be analyzed to apportion the Buskin Lake and Louise/Catherine lakes components and more accurately re-construct total

returns. Analyses of the return and age data will be incorporated into a brood table and used to evaluate the Biological Escapement Goal. Participants in the subsistence fishery will be surveyed to determine their residency and traditional areas fished.

Partnerships and Capacity Building

The investigators promote local hire of federally qualified subsistence users as project technicians. During each year of funding the investigators will continue a student intern program established in 2003 to provide education and career development opportunity for subsistence users. Through cooperation with the Kodiak National Wildlife Refuge (KNWR) the investigators have utilized the Buskin River weir as an educational tool for the KNWR Summer Science and Salmon Camp program.

Justification

This project addresses a priority information need listed in the 2010 Request for Proposals, is mostly a continuation of work successfully conducted since 2000, and the investigator has a proven record of successfully conducting and completing other Fisheries Resource Monitoring Program projects. The project is well designed with objectives that are clearly written, quantifiable, and achievable. A new project objective would provide estimates of the contributions of Buskin Lake and Louise/Catherine lakes stocks to subsistence harvests. This would allow managers to determine whether these stocks were being harvested in proportion to their total abundance, could indicate whether these stocks were available to the fishery throughout the season, and might also be useful in evaluating the escapement goal. While climate change effects were not included as a specific project objective, the investigator is encouraged to use the data time series from this project to document any trends and to provide management advice. The investigator has made strong efforts to improve capacity building, but it does not appear he can do anything further to advance this project component since no local organization appears willing or able to assume a role in operating this project. He has obtained impressive results from his high school student intern program, and his overall efforts have resulted in a very high level of partnership with the community as well as with agencies and local organizations. Finally, requested funding for the proposed work appears reasonable, and about 25% of the total cost would be provided as matching funds.

Project Number:	10-404
Project Title:	Buskin River Sockeye Salmon Smolt Assessment
Geographic Area:	Southwest Alaska
Information Type:	Stock Status and Trends
Principal Investigator:	Donn Tracy, ADF&G Division of Sport Fish

Costs: **2010:** $115,700 **2011:** $81,100

Recommendation: Fund

Issue

During a two year study investigators will assess feasibility of two methods to annually estimate total seaward emigration of Buskin River drainage sockeye salmon smolt for enhanced management of subsistence and other fisheries through run forecasting and refinement of the Biological Escapement Goal. Investigators will install weirs at outlets from Buskin and Louise/Catherine lakes to estimate smolt abundance and randomly sample outmigrant smolt for age, weight and length. Mark-recapture experiments utilizing downriver traps will also be conducted to estimate total smolt abundance.

Objectives

1. Estimate the sockeye salmon smolt emigration from Buskin, Louise and Catherine lakes between April 15 and June 30.
2. Estimate the age composition of emigrating smolt such that each age class proportion is estimated within 5% of the true values 95% of the time.

Methods

Investigators will annually install screened weirs at the outlets of Buskin River and Louise/Catherine lakes between April 15 and June 30 to trap emigrating smolt, extrapolate total abundance from biomass weights and sample counts, and also employ dye-testing and downriver traps to conduct periodic mark-recapture experiments as a comparative method of estimation. Additionally, smolt captured at the weirs will be randomly sampled to provide estimates of age proportions within 5% of the true values 95% of the time. Mean weight and mean length at age will also be calculated. With successful project results the investigators will seek a continuation of funding so that estimates of smolt abundance and age can be obtained to more accurately forecast future adult returns and to refine the Biological Escapement Goal.

Partnerships and Capacity Building

During each year of the project the investigators will strive to employ Kodiak residents, including Alaska Natives, and will attempt to incorporate into the smolt study a currently established high school student intern program targeting federally qualified subsistence users. Additionally, to the extent possible, use of Buskin River weirs by ADF&G and Kodiak National Wildlife Refuge as an educational tool for the Refuge's 'Summer Science and Salmon Camp' program will be expanded to include operations conducted as part of the proposed study.

Justification

This project addresses a priority information need listed in the 2010 Request for Proposals, and the investigator has a proven record of successfully conducting, administering, and completing other Fisheries Resource Monitoring Program projects. While partnership and capacity building was only rated as "Medium", there does not seem to be a local organization with an interest in assuming a role in operating Monitoring Program projects. Since smolt assessment has not been attempted on this system, this project would examine two different methods and determine the most suitable one for use on this particular system. Based on results from this feasibility study, a proposal for a fully operational project can be submitted for consideration in 2012. Since smolt is not as important for Federal subsistence fishery management as adult sockeye salmon assessment, Buskin River smolt assessment is not viewed as a continuing, long term commitment for the Fisheries Resource Monitoring Program. Therefore, a 2012 proposal would need to contain a clear statement of the number of years information should continue to be collected.

Project Number:	FIS 10-502
Project Title:	Tanada Creek Salmon Assessment
Geographic Region:	Southcentral Alaska
Information Type:	Stock Status and Trends
Principal Investigator:	Dave Sarafin, National Park Service

Cost: **2010:** $64,609 **2011:** $65,821 **2012:** $67,356 **2013:** $69,457

Recommendation: Fund

Issue

Accurate assessment of yearly run strength and migratory timing in tributaries to the Copper River is essential to the development of a management strategy that meets the mandates of the Alaska National Interest Lands Conservation Act. The upper Copper River sockeye salmon populations are of particular importance to both federally qualified and state subsistence users. Tanada Lake supports one of the uppermost runs of sockeye salmon on the Copper River, and the run supports subsistence salmon fisheries in both the Copper River and Tanada Creek. In January 2006, the Federal Subsistence Board adopted a proposal to allow use of a fyke net to harvest salmon in Tanada Creek upstream of the weir. This new gear type has not been used yet, but the Board's adoption of this regulation was based on the assumption that the inseason manager, the Park Superintendent for Wrangell-St. Elias National Park/Preserve, would have accurate knowledge of sockeye salmon escapement into the creek.

Objectives

1. To count by day, the number of adult sockeye and Chinook salmon migrating past a weir operated in Tanada Creek during the period of early-June through mid-September.
2. To estimate the age, sex, length composition of the Tanada Lake sockeye salmon escapement from otolith interpretation, such that the estimates are within 5% of the true proportion 90% of the time.

Methods

From late May through mid September, investigators will operate a floating resistance board weir equipped with an underwater video camera and recording system to count migrating adult salmon. Underwater LED lighting will permit viewable conditions during the nighttime and periods of low ambient light. Each day, the recorded video footage will be reviewed to count adult salmon, and the weir will be checked to ensure fish tight integrity. A passage gate will be closed during periods of video review or weir maintenance, but video will be recorded at all times the gate is open. The gate will also be closed whenever viewing conditions do not allow for video recording. Such conditions would only occur during high water events, which can be a problem at this site during some years. However, if the weir can be maintained during these conditions, it is likely that video recording can also be continued. Since all scales collected at the weir site have been unreadable due to extensive erosion of their margins, otoliths will be collected from carcasses in Tanada Lake during late-August thru September and sent to the Alaska Department of Fish and Game for age interpretation.

Partnerships and Capacity Building

Several local groups are interested in the Copper River watershed. This project provides an opportunity to collaborate with local students, tribes, Alaska Native culture camps, nonprofits, and agencies in the data collecting process. Biotechnician positions are currently filled under local hire designation. The Batzulnetas culture camp occurs the third week in June, and attendees participate in an interpretive visit to the weir site to learn about subsistence fisheries management. The Park has and will continue to collaborate with the Alaska Department of Fish and Game in conducting salmonid research in the Copper River.

Justification

Although this project does not address a priority information need listed in the 2010 Request for Proposals, this project is important for management and also has historical importance for the Federal subsistence fishery management program. Although the site has seen little use by Federally qualified fishers over the last two years, it is difficult to determine whether this will continue. Tanada Creek weir information may prove useful for post-season management assessments and devising pre-season management plans. The project site is used as an educational tool for local culture camps as well as to recover tagged salmon and collect genetic data. The investigator modified the objectives of this project, as requested in the project proposal review, so that they are quantifiable and measurable. While climate change effects were not included as a specific objective, the investigator is encouraged to document any observations and insights on climate change effects in reports. The principal investigator and his agency have attempted to institute efficiency and cost saving methods, requested annual costs would be about $14,000 less than those for the currently funded project, and the investigator's agency would provide almost half of the annual operating costs for the project. A second camera would be purchased for use as a backup in case the original camera fails. The investigator would examine ways to lessen effects of flood events, as was requested in the proposal review. Design of the camera housing and passage chute, coupled with closer monitoring of the weir and water conditions, make it unlikely that video recording would be hampered by turbid water conditions. Crew members would be trained prior to the season and monitored during the season to ensure video counts were accurate and comparable. This would be relatively easy to do since only one or two salmon usually pass the camera at the same time, the speed of the VHS tape and DVR hard drive can be adjusted during counting, and VHS and DVR recordings for the same time periods would be periodically reviewed and compared. Finally, while no local organization appears willing or able to assume a role in operating this project, partnership efforts have been very good and capacity building could be enhanced through use of student interns.

Project Number:	10-503
Project Title:	Copper River Chinook Salmon Assessment
Geographic Region:	Southcentral Alaska
Information Type:	Stock Status and Trends
Principal Investigator:	Keith van den Broek, Native Village of Eyak
Co-Investigator(s):	Jason J. Smith, LGL Alaska Research Associates, Inc.
	Michael R. Link, LGL Alaska Research Associates, Inc.

Cost: **2010:** $373,008 **2011:** $373,064 **2012:** $373,011 **2013:** $373,043

Recommendation: Fund

Issue

The importance of Copper River Chinook salmon to subsistence users has focused attention on the lack of information about escapement levels and distribution among tributaries. Despite the importance of this fishery resource, fishery managers have found it difficult to obtain annual estimates of Chinook salmon escapement to the drainage. Many stakeholders believe that escapement indices generated by conventional methods (sonar, aerial surveys and weirs on selected streams) have not adequately assessed the abundance of Copper River Chinook salmon stocks. The purpose of this project is to continue to estimate the annual system-wide escapement and run timing of Chinook salmon in the Copper River. The Native Village of Eyak has successfully provided annual inriver abundance estimates using identical methods to those proposed here since 2003 (Link et al. 2001; Smith et al. 2003; Smith 2004; Smith et al. 2005; Smith and van den Broek 2005, 2006; Smith et al. 2007; van den Broek et al. 2008; van den Broek et al. 2009). This project would continue work being conducted under project 07-503, and specifically addresses one of the priority information needs identified by the Office of Subsistence Management (OSM) in the FY10 Request for Proposals ("*Estimate total run abundance and obtain reliable estimates of spawning escapement for Chinook salmon*").

Objective

To estimate the annual inriver abundance of Chinook salmon returning to the Copper River from 2010 to 2013 such that the estimates are within 25% of the true value 95% of the time.

Methods

This project will estimate the annual inriver abundance of Copper River Chinook salmon at Baird Canyon using two-sample mark-recapture methods. A total of four large, live-capture fishwheels will be operated in the Copper River from May to August each year. Two fishwheels will be placed at Baird Canyon (rkm 69) and two near Canyon Creek (1 km below Wood Canyon). Escape panels will be used on the live tanks to minimize crowding by allowing sockeye salmon to escape. At each location, crews will visit the fishwheels a minimum of three times a day and remove all fish from the live tanks. Using a dip net, all healthy adult Chinook salmon measuring more than 500 mm fork length will be transferred from the live tanks to a water-filled, foam-lined trough for sampling. At Baird Canyon, all Chinook salmon, up to a maximum of 150/day, will be tagged using uniquely coded dorsal T-Bar Encapsulated Passive Integrated Transponder (TBA-PIT) tags and a secondary operculum punch. At Canyon Creek, all fish will be examined for presence or absence of a tag and operculum punch.

Data will be collected at both sample events using ruggedized handheld Palm computers with integrated scanners that detect and record data from the TBA-PIT tags. Project investigators and fishery managers will receive daily updates through email or on the Native Village of Eyak's website. A rigorous quality assurance and quality control process will be in place to ensure the data are collected, recorded and verified as accurately as possible during the season. Inriver abundance of Chinook salmon above Baird Canyon in each year of the study will be estimated using two-event mark-recapture methods. Tests will be performed to determine whether underlying assumptions for using this method have been met and whether modifications to data analyses are needed.

Partnerships and Capacity Building

This project provides the Native Village of Eyak with an opportunity for meaningful inclusion in the research and long-term management of Copper River salmon. The Native Village of Eyak will oversee all aspects of the project and provide critical logistical, technical and field assistance, thereby acquiring the array of skills needed to carry out major fisheries assessment projects. Fishery technicians will acquire the necessary skills and experience required for this and other fisheries research jobs. This project will allow the Native Village of Eyak to further develop the skills of its members via local training, hiring for key positions in future fisheries assessment projects, and recruiting and encouraging young people to get an education in fisheries and natural resource management. This project will also promote meaningful interactions between an Alaska Native organization and fisheries management agencies. Finally, the overall study design will engage tribal organizations from different regions of the Copper River drainage in discussions on the project and promote interactions among subsistence users. The Native Village of Eyak will continue to work with the Tribal Council, staff, consultants and government agencies to identify key personnel to help carry on a long-term program. The Native Village of Eyak will also actively participate in public meetings throughout the year to disseminate project results, review the project, and discuss future refinements. These consultations will culminate in the overall assessment of the project that will drive continued development of a long-term program.

Justification

This proposal addresses a priority information need identified in the 2010 Request for Proposals, and is ranked highly in all evaluation criteria. This project, operated and administered by an Alaska Native organization, provides one of the best examples of capacity building within the Fisheries Resource Monitoring Program. The proposed project would continue work begun in 2001 that is critically important to Federal and State agencies in managing Copper River Chinook salmon fisheries and sustaining the Chinook salmon resource. The objective of this project is quantifiable and measurable, the study design is sound, and the investigators are well qualified and have the resources to conduct and administer the proposed work. Although the investigators have attempted to institute efficiency and cost saving methods over the course of this project, annual costs have continued to rise and a source of matching funds has not been found. However, as requested in the proposal review, the investigators capped annual costs at a level that did not exceed $373,100, which is the annual project cost for 2009. While partnership and capacity building are both at high levels, there may still be room to improve outreach efforts with upriver communities and organizations.

Project Number: 10-505
Project Title: Long Lake Salmon Assessment
Geographic Area: Southcentral Alaska
Information Type: Stock Status and Trends
Principal Investigator: Molly McCormick, National Park Service

Cost: **2010:** $23,050 **2011:** $11,811 **2012:** $12,042 **2013:** $12,662

Recommendation: Fund

Issue

Accurate assessment of yearly run strength and migratory timing in tributaries to the Copper River is essential to the development of a management strategy that provides for natural and healthy populations as mandated by the Alaska National Interest Lands Conservation Act. The Upper Copper River sockeye salmon populations are of particular importance to both federally qualified and state subsistence users. The sockeye salmon stock that spawns within Long Lake is the largest salmon stock within the Chitina River drainage. The Chitina River drainage, approximately 5 million acres in size, is the largest anadromous drainage contained in its entirety within Wrangell-St. Elias National Park/Preserve. In addition, the Long Lake population has the longest known annual spawning duration of any sockeye salmon population in North America, and estimates of its abundance constitute the longest time series of salmon weir counts in the Copper River drainage. Thirty-five years of weir data show annual variations in abundance of Long Lake runs ranging from 631 to over 49,000 sockeye. This system is an excellent candidate for a long term monitoring site that can provide valuable data to examine the effects of climate change for relatively little cost.

Subsistence use of Copper River salmon occurs downstream of the Chitina River drainage in the Chitina Subdistrict of the Upper Copper River District. Federal subsistence users harvested 789 salmon here in 2008 using dipnets. This harvest number was down from a high of 1,379 in 2006. Harvest by as many as 10,000 households occurs in a state managed fishery that has been both a subsistence and personal use fishery with annual harvests as great as 125,000 salmon. All these fisheries harvest some of the salmon returning to Long Lake.

Objectives

1. To count adult sockeye salmon migrating past a weir from late July until mid October by using video equipment to count all individuals entering Long Lake.
2. To use hierarchical models and model selection criteria (e.g. AIC, DIC) to determine whether there are detectable trends in run timing and to identify relationships between run timing and climate conditions. Trends and relationships to climate variables would be considered to be identifiable if supported by the model selection criteria and if the 95% credible intervals did not include 0.
3. To estimate the age, sex, length composition of the sockeye salmon escapement from scale and otolith interpretation, such that the estimates are within 5% of the true proportion 90% of the time.

Methods

The project will use a weir, underwater video camera and a recording system to count the number of salmon migrating into Long Lake, and will also be a sampling platform to obtain age, sex and length information from a portion of the salmon migrating through the weir. The weir, sampling box, camera and recording system will be put in place in mid July. The weir will be checked and the video recording will be reviewed on a daily basis from late July to around October 15, and all adult salmon on the video recordings will be counted by species. A passage gate will be closed during periods of video review or weir maintenance, and video will be recorded during all times the gate is open. While a portion of the sockeye salmon run passing the weir will be sampled for age, sex and length, age information will also be obtained from otoliths obtained from carcasses of spawned out sockeye salmon sampled from the spawning grounds. Scale and otolith samples will be sent to the Alaska Department of Fish and Game for analysis. Since many scales have eroded margins, a length-at-age relation developed for Copper River sockeye salmon will be used to help interpret these scales. Stream and air temperature data, as well as water depth information, will be collected at the weir site. Weir operations will end in mid-October. At this time, all pickets will be removed from the weir structure, which will remain in place over the winter. Data analysis and reporting will take place during the winter months.

Partnerships and Capacity Building

Several local groups and organizations are interested in the Copper River watershed, including the Copper River Watershed Project and the Prince William Sound Science Center. This project provides an opportunity to collaborate with local students, nonprofits, and agencies to partner in the data collection process. Biotechnician positions have been filled under local hire designation. The Park has and will continue to collaborate with the Alaska Department of Fish and Game in conducting salmonid research in the Copper River.

Justification

Although this project does not address a priority information need listed in the 2010 Request for Proposals, the relatively long time series of salmon passage, water depth recordings, and temperature measurements at the Long Lake weir site would provide useful information to assess management performance, suggest changes in management strategies, and monitor effects of climate change. The investigator modified the objectives of this project, as requested in the project proposal review, so that they are quantifiable and measurable, and included climate change effects as part of one of the objectives. The principal investigator and her agency have attempted to institute efficiency and cost saving methods, requested annual costs would be about $7,000 or $8,000 less than those for the currently funded project, and the investigator's agency would provide almost half of the annual operating costs for the project. The use of video technology would allow visual records of salmon escapement to be saved, reduce operating costs, allow salmon to pass the weir at all times of the day, and reduce bear predation and other problems caused by concentrating salmon below the weirs. Crew members would be trained prior to the season and monitored during the season to ensure video counts were accurate and comparable. This would be relatively easy to do since the passage chute would usually allow only one or two salmon to pass the camera at a same time, the speed of the VHS tape and DVR hard drive could be adjusted during counting, and VHS and DVR recordings for the same time periods would be periodically reviewed and compared. Finally, while no local organization appears willing or able to assume a role in operating this project, partnership efforts have been very good.

Project Number:	10-552
Project Title:	Copper River Subsistence Salmon Harvest Validity
Geographic Region:	Southcentral Alaska
Information Type:	Harvest Monitoring and Traditional Ecological Knowledge
Principal Investigator:	James Brady, HDR, Alaska
Co-Investigators:	Dr. William Simeone, ADF&G Division of Subsistence
	Erica McCall-Valentine, Ecotrust

Cost: **2010:** $211,631 **2011:** $194,782 **2012:** $42,903

Recommendation: Fund

Issue

This three-year project responds to an information need identified as a high priority for the Southcentral Region in the 2010 Monitoring Program Request for Proposal to determine the validity and reliability of permit estimates of subsistence salmon harvests from the Copper River. Under both State and Federal regulations, fish wheels must be operated by only one permit holder at a time, and the permit holder is required to enter all harvested fish on a permit before concealing the fish from view or removing them from the fishing site. If this does not occur, then the permit data are not capturing all of the harvest. The investigators hypothesize that one source of error in the reporting process is the way fish wheel owners manage their fish wheels and another source of error may be how agencies collect and compile harvest data.

Objectives

1. Systematically describe and analyze the process by which harvest data is compiled and reported by State and Federal subsistence management agencies.
2. Investigate the validity of the potential sources of error.

Methods

1. Conduct semi-directed interviews to document the processes by which subsistence salmon harvest data is compiled, reported and shared by state and federal subsistence management agencies;
2. Conduct a structured systems analysis to visualize and analyze the processes by which harvest data is compiled, reported and shared by state and federal subsistence management agencies;
3. Conduct preseason and postseason interviews with fish wheel owners at Copperville and the Chitina/McCarthy Bridge to determine operating, management, and reporting techniques;
4. Monitor selected fish wheels at Copperville and the Chitina/McCarthy Bridge during a fishing season to document activity, harvest rates and catch per unit effort; and
5. Assess evidence for unreported harvest through a post season postal survey.

Partnerships and Capacity Building

This investigation directly addresses concerns expressed by Copper River basin residents. Investigators met with the Ahtna Subsistence Committee and discussed this proposed study. While the Ahtna

Subsistence Committee was not interested in being involved in the project, the investigators will continue to consult with the Ahtna Subsistence Committee for hiring the local field technicians for the project. At the conclusion of the project, the investigators will present findings of the study to the Ahtna Subsistence Committee. Local cooperation will be sought by contracting local research assistants to perform field research activities, including a local field technician and partial funding for the Ecotrust Tribal Projects Coordinator; both positions will be Ahtna. Their traditional knowledge of the Copper River, of fish wheel operations and of subsistence fishing practices will strengthen the research activities. Through their participation in the project they will gain new skill sets and knowledge and will broaden community education. Additionally, the investigators will be working closely with fish wheel owners developing two-way communication with them. The investigators will count on the fish wheel owners to counsel them during the pre-season interviews to refine or adapt later study approaches to improve the success of the project. Study findings will be reported back to the fish wheel owners at the conclusion of the project.

Justification

The goal of this three-year, collaborative project is to evaluate the validity of annual subsistence salmon harvest estimates for the Upper Copper River. The investigators hypothesize that one source of error in the reporting process is the way fish wheel owners manage their fish wheels and another source of error may be how agencies collect and compile harvest data. The focus of the study design is two pronged: objective one describes and analyzes how subsistence salmon harvest data are compiled and reported by State and Federal managers and investigates the potential sources of error. Objective two focuses on fish wheel management. The project includes pre-and post season interviews of 60% of fish wheel owners, monitoring fish wheels at Copperville and Chitina/McCarthy Bridge to document activity, harvest rates, and catch per unit effort through participant observation and fish wheel rotation counters on 20 fish wheels, as well as a post-season postal survey. The proposed project is technically sound. The investigators are well-qualified, although there have been concerns in the past with the co-principal investigators regarding timeliness. In response to this concern, an additional year has been added to the original proposed schedule. This project provides a medium capacity building component. This proposal addresses an information need specifically identified as a high priority for the Southcentral Region in the 2010 Monitoring Program Request for Proposal and the Federal linkage is strong.

Project Number:	10-600
Project Title:	Karta River Sockeye Salmon Assessment
Geographic Area:	Southeast Alaska
Information Type:	Stock Status and Trends
Principal Investigators:	Michael Peel, Organized Village of Kasaan
	Paula Peterson, Organized Village of Kasaan
Co-Investigators:	Glenn Chen, Bureau of Indian Affairs
	Ben VanAlen and Jeffery Reeves, USFS
	Steve Heinl, ADF&G Division of Commercial Fisheries

Cost: **2010:** $157,545 **2011:** $142,108 **2012:** $152,162 **2013:** $161,424

Recommendation: Fund

Issues

The objective of this proposal is to determine an escapement estimate and population structure of sockeye salmon stocks on the Karta River, which is identified as an information need for Southeast Alaska as stated in the call for proposals. This will be done by placing a weir on the Karta River and counting sockeye as they migrate back into the river. Escapement estimates will be cross-checked using mark-recapture methods. The project fully meets the federal jurisdiction criteria for FRMP funding because of the ecological association of the marine subsistence fishery to an adjacent federal CSU. Sockeye salmon returning to this system spawn in the Karta River.

Objectives

1. Count the number of sockeye salmon returning to the Karta River system via a weir between June 1 and September 15 of each year.
2. Estimate the total escapement of sockeye salmon into the Karta River system using mark-recapture methods so that the estimated coefficient of variation is less than 15%.
3. Estimate the age, length, and sex composition of the Karta River system sockeye escapement so that the estimated coefficient of variation for the dominate age class is less than 10%.

Methods

The project will estimate the number of sockeye salmon returning to the Karta River system. Escapement data will be collected at an adult fish weir. In addition to counting the number of returning fish, age, sex and length data will be taken to evaluate population structure. A mark-recapture estimate will be used to validate the weir count and determine if any sockeye passed the weir without detection. Sockeye will be marked at the weir with a fin clip, and re-capture efforts will focus on two known spawning creeks: McGilvery and Anderson Creeks. The mark-recapture estimate will be used as the escapement estimate in the event that the weir is breached for a period of time.

Partnerships and Capacity Building

Glenn Chen of BIA has agreed to continue to work with OVK on building capacity and technical support for their fisheries program. Collaboration with the U.S. Forest Service (USFS) and the ADF&G

is essential in making this project successful. The USFS, Craig Ranger District has agreed to provide technical support by providing feedback on operation planning and technical report writing. OVK currently has an USFS wilderness permit that will expire at the end of the 2009 field season, and collaboration between agencies will be required to get this permit re-issued. The ADF&G Commercial Fisheries has agreed to continue its technical support by providing assistance with operational planning, fish scale reading and report writing. OVK will apply a local hire priority for this project.

Justification

This project would provide reliable estimates escapement and age composition of sockeye salmon into the Karta Lake system using a picket weir and mark-recapture validation techniques. This run is an important subsistence resource for the community of Kasaan, and there are concerns with reduced escapement estimates and subsistence harvests. The need for escapement estimates of sockeye salmon at Karta was listed as a priority in the 2006 Southeast Alaska Strategic Plan; and was included as a priority information need in the 2010 Request for Proposals. The principal and co-investigators have experience with this type of salmon stock assessment project and have demonstrated their ability to accomplish project objectives. The project is technically sound and achievable. The budget is reasonable and capacity building is at the highest level, since funds would go directly to the Organized Village of Kasaan to operate and administer the project.

Project Number:	10-601
Project Title:	Hatchery Creek Sockeye Salmon Assessment
Geographic Area:	Southeast Alaska
Information Type:	Stock Status and Trends
Principal Investigator:	Jeff Reeves, USFS Craig Ranger District
Co-Investigators:	Ben VanAlen, USFS Juneau Ranger District Mike Peel and Paula Peterson, Organized Village of Dr. Glenn Chen, Bureau of Indian Affairs.

Cost: **2010:** $182,784 **2011:** $164,621 **2012:** $175,172 **2013:** $173,773

Recommendation: Fund

Issue

Sockeye salmon (*Oncorhynchus nerka)* comprise the most important subsistence fishery resource for rural residents in the Southeast Alaska region. The Hatchery Creek drainage on Prince of Wales Island (PWI) has supported extensive subsistence and sport harvests by both Alaska resident and non-resident anglers. This proposed project addresses a critical Southeast Alaska subsistence fishery concern that has been repeatedly identified as a monitoring need by the Southeast Federal Subsistence Regional Advisory Council (SERAC) and the Southeast Alaska Fisheries Information Service Strategic Plan. Both the U.S. Forest Service and the Alaska Department of Fish and Game also consider the management of the Hatchery Creek sockeye salmon population to be a key subsistence issue for Prince of Wales Island due to the early run timing and uniqueness of this sockeye population.

Objectives

1. Estimate the total escapement of adult and jack sockeye salmon that pass above the upper falls on Hatchery Creek with a weir/mark-recapture project such that the estimated coefficient of variation is less than 15%.
2. Estimate the age, length, and sex composition of the Hatchery Creek system sockeye escapement so that the estimated coefficient of variation for the dominant age class is less than 10%.

Methods

1. A channel-spanning aluminum and steel bipod weir will be employed to census the early run sockeye populations in Hatchery Creek. The weir will be installed at a location above the falls, and will be operated continuously from the 1st of June until August 30th during each of the study years. Sockeye will be adipose-clipped at the picket weir and examined for adipose clips as they swim upstream through a "net weir" past video cameras and, if needed, in the main inlet streams and beach spawning areas using dipnet and seine gear. A running average of 50% of the sockeye salmon counted through the picket weir each day will be marked with an adipose fin clip
2. The age, sex, and length (ASL) composition of the early run Hatchery Creek sockeye salmon subpopulation will be assessed from *in-situ* sampling of returning adult fish captured at the weir. ASL information will be collected during each year of the proposed study. Individuals will be sampled at systematic intervals, corresponding to frequencies that are designed to obtain a minimum total annual *N* of 400.

Partnerships and Capacity Building

This proposed project has substantial capacity development aspects associated with it. Both the USFS and OVK will be provided funds to compensate the lead field fisheries biologisst and hire the field technicians needed for this study; local hiring priority will be given to qualified personnel from the PWI Native organizations and Island's rural communities to fill these positions. This proposal represents the results of extensive interagency cooperation between fisheries and subsistence program personnel from the OVK, the USFS, and the BIA. Sharing of data among all of the agencies involved in this subsistence fishery will provide better information to improve management of Hatchery Creek sockeye salmon for all users.

Justification

This project will support continued operation of the Hatchery Creek weir to estimate the escapement and age, sex, and length composition of sockeye salmon. This is a continuation of FRMP project 07-601 with an increased emphasis in the design and operation of a picket weir that encourages fish to pass without delay and increased emphasis in a mark-recapture estimate of escapement. The remote, multi-lake, distribution of spawners above the weir makes it difficult to do a simple mark-at-the-weir, examine-on-the-spawning grounds mark-recapture study so video sampling for weir marks (adipose fin clips) is planned. This is a high priority project in the Southeast Alaska region given the uncertain escapement levels and high potential harvest by the rural residents of Prince of Wales Island. Management actions have been taken the past six years to restrict or close sport, personal use, or federal subsistence fishing for sockeye salmon in Hatchery Creek. This project promotes good collaboration among the Organized Village of Kasaan, Alaska Department of Fish and Game, US Forest Service, and USDI Bureau of Indian Affairs investigators. The principal investigator will be a Forest Service biologist and the weir personnel will be Organized Village of Kasaan employees.

Project Number:	10-603
Project Title:	Yakutat Eulachon Surveys
Geographic Area:	Southeast Alaska
Information Type:	Stock Status and Trends
Principal Investigator:	Barbara Adams, USFS, Yakutat Ranger District
Co-Investigators:	Bill Lucey, Yakutat Salmon Board
	Brian Marston, ADF&G Yakutat District
	Ben Van Alen, USFS Juneau Ranger District
	Nate Catterson, USFS Yakutat Ranger District

Cost: **2010:** $27,509 **2011:** $27,853 **2012:** $29,865 **2013:** $31,558

Recommendation: Fund

Issue

Little is known, and less is written, about the annual distribution, timing, and abundance of eulachon (*Thaleichthys pacificus*) along the Yakutat Foreland (Willson et al. 2006). This project will provide baseline stock assessment information from Tawah Creek to the Doame River. This information is needed to understand the status of these stocks and better provide for the continuation of subsistence take by the Federally qualified subsistence users in Yakutat. In November 2007, NMFS received a petition to list the Pacific Eulachon in California, Oregon and Washington as a threatened or endangered species. If this petition is granted, all information gathered on other Eulachon areas would be of value.

Objective

Estimate the timing, distribution, and relative abundance of eulachon in river systems along the Yakutat foreland from Tawah Creek to the Doame River.

Methods

The project will consist of five or six fixed-wing flight surveys looking for eulachon at the estuary/mouth and lower reaches of the streams along the Yakutat Foreland from Tawah Creek to the Doame River. Surveys will be flown about every 10 days between mid-February and early-April, weather permitting. Survey dates and times will vary due to weather and plane availability but the down and back flight paths will be relatively consistent. For each stream, observers will record presence/absence of eulachon, take pictures of any Eulachon present and, if present, abundance will be estimated (some, few, moderate, or lots). Along with these qualitative measures, observers will map eulachon observations along the river taking a GPS point at the upper and lower most reaches of the Eulachon, record observed predators such as birds and mammals and record survey conditions. On the ground observations will be considered for glacial streams or during times when turbidity is high, when possible. These observations will be maintained in a database that is easily shared. There is a possibility that the mapped information could be imported into a GIS application to better quantify timing, distribution, and abundance of annual runs of eulachon. We will try to have at least one observer do all the flights for the same year barring any unforeseen circumstances. Photos of the rivers with Eulachon will assist us in consistency among observers. When conditions are right, estuary areas may be sampled for Eulachon on a small number of the sites in an effort to make sure that what we are seeing are really Eulachon and not herring. Although,

any fish in the upper reaches of the streams will be considered Eulachon since herring do not go into freshwater. We will contact the local bush pilots who fly the area and ask them to contact us if they see Eulachon in the rivers. These pilots have been very helpful with these projects in the past. We will also contact known Eulachon subsistence users to see where and when they are getting their harvest.

Partnerships and Capacity Building

The project will be a collaboration between U.S. Forest Service (FS), Yakutat Salmon Board (YSB) and Alaska Department of Fish and Game (ADF&G). The fieldwork will be completed mostly by the YSB, ADF&G and some FS. The FS will be responsible for the contracting and payment of the airplane as well as the annual reports and final report.

Justification

This project would detect presence, timing and provide an abundance index for eulachon returning to 19 streams of the Yakutat forelands in the months of February and April via five or six aerial surveys. Surveys will be flown approximately every ten days throughout the eulachon spawning season. This project addresses a priority information need as stated in the 2010 Request for Proposals. This information is needed to better understand the eulachon resource and provide for the continuation of subsistence take by Federally qualified subsistence users in Yakutat. The project should provide a reasonable index of abundance, timing, distribution and trend information for eulachon on the Yakutat Forelands. The investigators have the experience to complete the project. The budget is commensurate with the scope of the project. There is good cooperation with local groups. The project would add to the overall knowledge and management of eulachon near Yakutat as well as other streams along the coast of Southeast Alaska.

Project Number:	10-604
Project Title:	Klag Lake Sockeye Salmon Assessment
Geographic Region:	Southeast Alaska
Information Type:	Stock Status and Trends
Principle Investigator:	Benjamin Mann, Sitka Tribe of Alaska.
Co-Investigator:	Terry Suminski, US Forest Service

Cost: 2010: $128,242 **2011:** $128,111 **2012:** $134,514 **2013:** $141,239

Recommendation: Fund

Issue

Sockeye salmon are an important subsistence resource for the community of Sitka, AK and Klag Bay has customary and traditional designation for sockeye and other resources for Sitka residents. Klag Bay is the third most important producer of sockeye salmon for subsistence users, behind Redoubt and Necker Bays. During low escapement and/or high exploitation years at Redoubt and Necker, Klag Bay subsistence harvest becomes a higher priority and is subject to higher exploitation. Escapement levels in Klag Bay were at an eight-year low in 2008 with approximately 30% of an eight-year average annual escapement returning to Klag Lake to spawn. If escapement numbers continue to be reduced in the Klag Bay system while harvesting levels remain consistent, the population could be overharvested, becoming unsustainable. Daily weir counts and in-season harvest monitoring will provide the data needed for effective in-season management and is critical for sustaining the Klag system sockeye population.

Objectives

1. Enumerate the escapement of sockeye using a weir and mark-recapture methods.
2. Describe the run-timing, or proportional daily passage of sockeye salmon through the weir.
3. To estimate the sex and age composition of sockeye salmon such that the coefficient of variation is 10% or less.
4. To enumerate harvest totals by subsistence and sport fishermen at Klag Bay so that the coefficient of variation is 15% or less.

Methods

A weir will be installed in the outlet stream of Klag Lake and all salmonids entering the lake will be passed through a trap and counted by the field crew. Counts will be recorded by species and approximately 20% of the sockeye salmon will be sampled for sex (M/F), length (mm), and weight (g) to describe run timing and scale samples taken for age analysis. Sampled fish will also be given fin clip for a mark-recapture study. Recovery events for the mark-recapture study will occur on the spawning grounds once the fish have reached the area to spawn. Fish will be sampled using dip nets with a minimum of two recovery events pending assessed need. Recovered fish will receive an additional mark to ensure sampling is conducted without replacement. The total number of fish sampled and the number of sampled fish with marks will be recorded. If the ratio of marked-to-unmarked fish in the recovery sample is significantly different than the ratio of marked-to-unmarked fish at the weir, the mark-recapture study will be used to estimate overall sockeye escapement into Klag Lake. If the ratios are consistent, the weir count will be used as the escapement estimate. Weir technicians will also conduct a creel survey to estimate the sockeye harvest in Klag Bay. Escapement and harvest data will be reported to Terry Suminski (USFS) daily via

Forrest Service Radio Network to aid in-season management of the fishery. In addition to the above, weekly reports will be submitted to Dave Gordon (ADF&G, Sitka Area Management Biologist), and Troy Tydingco (ADF&G, Sitka Area Sportfish biologist) regarding stream height and temperature.

Partnership/Capacity Building

The Sitka Tribe of Alaska will take the lead role in project design, field operations, daily data collection, analysis, and report writing. The Tribe will also collaborate with, and report data to the USFS, the ADF&G, and the Office of Subsistence Management. Terry Suminski (USFS) will work closely with the PI to ensure accurate, reliable data collection and that operations are completed successfully. Local residents will be hired to operate the weir and collect escapement, mark-recapture, and harvest data. An effort is being made to attract residents with a desire to work in an environmental field and provide them with experience and skills that will enhance their ability to be successful. Technicians will work under a crew leader that will be chosen from a list of applicants with an educational background in natural resources. This will provide them access to knowledge and training on a day-to-day basis throughout the field season while assuring accurate, reliable data is collected.

Justification

This project will support continued operation of the Klag Lake sockeye stock assessment project to estimate the sport and subsistence harvest of sockeye salmon in Klag Bay and the escapement and age, sex, and length composition of sockeye salmon into Klag Lake. Annual escapements of Klag Lake sockeye salmon have been successfully estimated with this weir and weir-to-above-weir mark-recapture project. Klag Lake sockeye salmon are an important subsistence resource to residents of Sitka, especially in years when the Redoubt Lake sockeye run is low. This project represents the highest level of community involvement since all project funding will go to the Sitka Tribe of Alaska and they will employ the principal investigator and all field personnel and take the lead in analysis and reporting on project findings.

Project Number:	10-605
Project Title:	Sitkoh Lake Sockeye Salmon Assessment
Geographic Region:	Southeast Alaska
Information Type:	Stock Status and Trends
Principal Investigator:	Ben Van Alen, U. S. Forest Service
Co-Investigators:	Raynelle Jack, Angoon Community Association
	Scale Lab, ADF&G Division of Commercial Fisheries

Cost: **2010:** $71,445 **2011:** $68,751 **2012:** $70,750 **2013:** $72,755

Recommendation: Fund

Issue

FRMP funds are needed to reinstate the Sitkoh Lake sockeye stock status and trends project that began in 2001 but ended in 2006.

Objectives

Index the annual escapement of sockeye salmon into Sitkoh Lake using mark-recapture and remote sensing methods so that the estimated coefficient of variation is less than 20%.

Estimate the age, sex, and length composition of the sockeye salmon escapement into Sitkoh Lake with a coefficient of variation less than 20% for the principal age class.

Methods

This project will continue using mark-recapture methods to index the abundance of sockeye spawning in the "study area" adjacent to the U.S. Forest Service's West Cabin (Cook 1998; Crabtree 2000, 2001; Conitz and Cartwright 2003, 2005, 2007; Burril and Conitz 2007; and Conitz and Burril 2008). Sampling trips will be made in mid-September, late-September/early-October, and mid-October at a minimum. Sockeye salmon will be sampled for scale (age), sex, and length data using standard ADF&G methods. Time-lapse video of key beach spawning areas will also be tested to assess the timing and abundance of sockeye spawners into Sitkoh Lake.

Partnerships and Capacity Building

The Angoon Community Association (ACA), ADF&G, and USDA Forest Service have been cooperating on the stock assessment of Sitkoh Lake sockeye salmon since 2001. This project will provide September and October employment for ACA employees who work on the Kook Lake sockeye stock assessment project. The USFS will seek to fill the project biologist position with a local ANILCA hire.

Justification

This project will continue using mark-recapture methods to index the abundance of sockeye spawning in a study area in Sitkoh Lake. The need for escapement estimates of sockeye salmon at Sitkoh Lake was listed as a priority in the 2006 Southeast Alaska Strategic Plan; and was included as a priority information need in the 2010 Request for Proposals. Angoon residents currently rely on Kook and Sitkoh stocks for their subsistence sockeye harvest since Kanalku sockeye escapements have been poor. Technical merit is

high with objectives and methods that are clear, measurable, and achievable. The project would build on previous mark-recapture indexes using a study design proven to work at this location. The investigators have completed projects funded by the FRMP. Partnership and Capacity Building is rated medium since The US Forest Service is taking the lead role in implementing this project and the Angoon Community Association is providing field technicians and some supplies and transportation.

Project Number:	10-606
Project Title:	Hetta Lake Sockeye Salmon Assessment.
Geographic Region:	Southeast Alaska
Information Type:	Stock Status Trends
Principle Investigator:	Anthony Christianson, Hydaburg Cooperative Association
Co-Investigator:	Cathy Needham, Kai Environmental Consulting Services

Cost **2010:** $181,278 **2011:** $165,416 **2012:** $171,884 **2013:** $169,052

Recommendation: Fund

Issue

HCA is proposing to continue work on assessing the subsistence harvest and escapement of sockeye salmon into Hydaburg's most important subsistence system, Hetta Lakes. This information will continue to allow HCA and resource management agencies to monitor actual harvest in Hetta, and compare the percentage of harvest back to escapement estimates in order to manage the system more accurately. This proposal address priorities set forth in the 2010 Request for Proposals and the Strategic Plan for the Subsistence Fisheries Resource Monitoring Program (2006) by addressing the highest priority species (sockeye salmon) and information need (estimate of current escarpment).

Objectives

1. Census the sockeye harvest by subsistence fishers in the terminal areas of Hetta, Eek, Kasook, and Hunter Bay using completed-trip interviews of all fishers on the fishing grounds or immediately upon returning to Hydaburg from the fishing grounds.
2. Count the number of sockeye salmon and other salmonids returning to Hetta Lake through a weir.
3. Estimate the escapement of sockeye salmon into Hetta Lake using mark-recapture methods so that the estimated coefficient of variation is less than 10%.
4. Estimate the age composition of the sockeye escapement so that the coefficient of variation is 10% or less for the two major age classes and describe the size distribution of each age class by sex.

Methods

Each year, crew members will monitor the subsistence grounds, and interview all fishers once their harvest for the day is complete. Information collected during each interview will include date, area fished, interview location, time of interview, gear used, number of hours fished, number of net sets, catch by species, and comments. A channel spanning bipod weir will be constructed on the outlet stream of Hetta Lake, with a trap constructed to capture fish migrating upstream to spawn. The weir will operate from June through September of each year, and all fish crossing the weir will be identified and counted. Approximately 20% of the sockeye salmon that cross the weir will be fin-clipped, using a stratified two-sample marking system to differentiate across the run. Each year, crews will make 5 -6 trips to spawning grounds to seine and dip net fish for the recapture events, and record the recovery of marked fish. Approximately 600 fish that were marked at the weir, will also be sampled for age, sex and length data. Fish will be measured and sexed on site. Scales will be removed and sent to ADFG to be read to determine age. Data will be analyzed to estimate the spawning population of sockeye, and the mark-recapture study will be used to validate the weir count. Weekly in-season reports of harvest and weir

counts will be shared with state and federal agencies. Annual reports will be produced after each field season, and a final report including all four seasons will be produced at the end of the project.

Partnership/Capacity Building

Over the past 8 seasons, HCA has been working with Alaska Department of Fish and Game to build capacity on Fisheries Resource Monitoring Program projects with a goal of taking over operations in their entirety by the 2009 field season. HCA has accomplished this goal and demonstrates community control level of involvement. ADFG will still offer scale reading services to the project

Justification

This project would continue operation of the FRMP Hetta Lake sockeye stock assessment project that began in 2001. This project has successfully estimated the Hetta Lake sockeye escapement using weir and mark-recapture and estimated the subsistence sockeye harvest by Hydaburg residents using completed-trip interviews. Hetta Lake supports one of the larger subsistence sockeye harvests in the region and the most important to residents of Hydaburg. This system is in close proximity to significant commercial fisheries, the potential for significant competing harvest is high, subsistence exploitation is high, and there is evidence of recent low escapements that could limit future returns. Hydaburg Cooperative Association staff has performed admirably in implementing this relatively large and complex program with assistance from ADF&G in the past and this will continue with some assistance from an environmental consultant. This project represents the highest level of community involvement since all project funding will go to the Hydaburg Cooperative Association and they will employ the principal investigator and all field personnel and take the lead in analysis and reporting on project findings.

Project Number:	10-607
Title:	Kanalku Lake Sockeye Salmon Assessment
Geographic Area:	Southeast Alaska
Information Type:	Stock Status and Trends
Principal Investigator:	Julie Bednarski, ADF&G Division of Commercial Fisheries
Co-Investigators:	Edward Gamble Sr., Angoon Community

Cost: **2010:** $178,773 **2011:** $187,713 **2012:** $197,099 **2013:** $206,953

Recommendation: Fund

Issue

The area around Kanalku Bay and Kanalku Lake is one of the Angoon people's oldest and most frequently-used subsistence fishing and hunting areas, and their use has always centered around the Kanalku Lake sockeye salmon run (George and Bosworth 1988). In recent years, subsistence fishers and fisheries management biologists have observed a sharp decline in sockeye salmon returns and severely reduced harvest opportunities in the Kanalku Lake system (Conitz and Cartwright 2005; M. Kookesh retired subsistence biologist, ADF&G, personal communication 2002).

The Kanalku Lake sockeye stock assessment project began in 2001, and in that year the escapement of sockeye salmon in Kanalku Lake was less than 250 fish (Conitz and Cartwright 2002). This discovery prompted an agreement between ADF&G management and the community of Angoon to implement a voluntary fishing closure in Kanalku Bay in 2002. Since the voluntary fishing closures sockeye salmon escapement have been generally stable, and fluctuated from about 1,600 fish in 2002 to less than 300 fish in 2003 (Conitz and Cartwright 2005. Although the size of the harvest has clearly been reduced by the voluntary closure, we do not know the true relationship between harvest and escapement. A majority of Angoon residents supported the closure and abstained from fishing in Kanalku Bay in the years after it was implemented. However, the voluntary closure was not universally observed, and became increasingly contentious in 2004 and 2005. ADF&G management biologists have decided to recommend it not be continued in 2006. However, these managers are planning to limit the regular subsistence season and restrict the possession limit for sockeye salmon in Kanalku Bay in 2006, to try and keep effort and harvest low and protect the escapement. Federal subsistence management biologists have not yet decided whether to implement similar limits on the federal portion of the Kanalku subsistence fishery (B. Van Alen USFS biologist, personal communication 2006). In order to be effective, management plans for the Kanalku subsistence fishery must be supported with accurate information about the size and timing of the sockeye run. The small run size on one hand and its importance to the people of Angoon on the other indicate that both the harvest and escapement should be closely monitored

Objectives

1. Estimate the total escapement sockeye salmon into Kanalku Lake using weir and mark-recapture methods so that the estimated coefficient of variation is less than 15 percent.
2. From sockeye salmon sampled at the weir, estimate proportions of fish in each age-sex category with estimated coefficient of variation 10% or less for the two major age classes. Also, estimate the mean length of fish in each age-sex category with estimated coefficient of variation less than 5%.

Methods

A conventional aluminum frame weir opening into an adjoining rectangular trap will be placed across Kanalku Creek, close to the lake outlet. The weir will be periodically opened (usually 1 - 2 times per day) and fish moving upstream visually counted. As a check to the weir counts of total escapement, a two-sample Petersen will be used to estimate for total escapement, based on the total number of fish marked as they move into the lake (first sample), the total number of fish subsequently sampled for marks on the spawning grounds (second sample), and the number of marks recovered in the second sample.

On the first day of each week, fish entering the trap will be retained for marking and sampling. A total of 500 sockeye salmon, but not more than 50% of the total run, will be marked using an adipose clip and uniquely-numbered t-bar tags. As soon as sockeye salmon appear on the spawning grounds, mark-recovery sampling will begin. Recapture events will be conducted on the spawning grounds at approximately weekly intervals throughout the spawning period Fish will be sampled in all accessible spawning areas. Tag numbers applied at the weir will be sorted into weekly strata based on the week in which they were applied at the weir. Recapture strata are simply the mark-recovery sampling events on the spawning grounds. We will estimate tag loss in this study by recording recaptures of sockeye salmon with a clipped adipose fin but no tag, and calculating the proportion of such fish in the total number of recaptures. Because all tagged fish will be marked with adipose clips, fish with lost tags can be identified as recaptures and included in the recapture data, although the initial capture strata of such fish will be unknown. Recaptures of fish with lost tags can be apportioned, if necessary, to initial capture strata based on proportions of all fish marked at the trap in each stratum.

Length, sex, and scale samples will be collected from 500 adult sockeye salmon sampled at the weir on the outlet of Kanalku Lake to estimate the size and age structure of the population, by sex. Fish will be sampled for scales, sex, and length at the weir, using the same weekly schedule described for marking fish under Objective 2.

Partnerships and Capacity Building

ACA has successfully managed hiring, personnel issues, payroll, budgeting, and procurement of supplies and services over the past five years as a cooperator in fisheries research projects. ACA fisheries technicians will refresh or learn scale, age, and length sampling techniques, methods and rationale for ageing sockeye salmon, mark-recapture sampling techniques and theory, salmon life history, lake ecology, and limnology sampling techniques. Crew members will also have an opportunity to learn or enhance computer skills and work with digital video technology. In addition, all ACA, ADF&G, and USFS field staff will receive safety training including wilderness first aid and CPR, wilderness survival, safety around bears, water and boating safety, safe travel in aircraft, and remote radio and phone communications. All pre-season and on-the-job training serves to promote safety in the field, enhance the job skills of seasonal workers, and contribute to interest in and capacity for fisheries research in rural subsistence communities.

Justification

This project will use a picket weir validated with mark-recapture methods to estimate the escapements of sockeye salmon into Kanalku Lake. Sockeye salmon will be sampled for scale (age), sex, and length data. The need for escapement estimates of sockeye salmon at Kanalku was listed as a priority in the 2006 Southeast Alaska Strategic Plan; and was included as a priority information need in the 2010 Request for Proposals. Escapement has been low and harvest rates have been quite high. Angoon residents currently must travel farther, to Kook and Sitkoh Lakes, since Kanalku sockeye escapements have been poor. In recent years there have been subsistence fishery restrictions at Kanalku, so there is an increased need for

information on both spawning escapements and fishery contributions of sockeye salmon stocks in the Northern Chatham Strait area. Technical merit is high with clear, measurable and achievable objectives. The investigators have completed projects funded by the Fisheries Resource Monitoring Program. The Partnership and Capacity Building is rated as medium since the ADF&G is taking the lead role in implementing this project and the Angoon Community Association is providing field technicians and some supplies and transportation.

Project Number:	10-609
Project Title:	Falls Lake Sockeye Salmon Assessment
Geographic Region:	Southeast Alaska
Information Type:	Stock Status and Trends
Principal Investigator:	Terry Suminski, USFS Tongass National Forest.
Co-Investigator:	Dawn Jackson, Organized Village of Kake

Costs: **2010:** $118,654 **2011:** $118,019 **2012:** $123,421 **2013:** $129,885

Recommendation: Fund

Issues

Sockeye salmon returning to Falls Lake are heavily utilized by Kake residents. Because of the need for careful monitoring of this sockeye run and the need for active management of its subsistence fishery, the stock assessment program is needed to assess both harvest and escapement. In season assessments allow managers to maximize subsistence uses of sockeye. Without an in season assessment of sockeye abundance and subsistence harvest, mangers would be forced to manage more conservatively (lower harvest limits and shorter season) which could result in lost harvest opportunity for users.

Objectives

Estimate the escapement of sockeye salmon into Falls Lake, as they enter the lake, using mark-recapture methods.

Estimate the subsistence harvest of sockeye salmon in the marine area around Falls Lake Creek with an estimated coefficient of variation less than 15%.

Estimate the age, sex, and size distribution of sockeye salmon in the Falls Lake escapement with an estimated coefficient of variation less than 5% for each estimate.

Methods

We will count sockeye salmon through a trap at the top of the fish ladder and will mark each fish with a fin clip. A net weir equipped with a video camera will be installed immediately upstream (in the lake) and used to recapture fish to sample for marks. Counts of all fish passed will be recorded by species. The abundance of sockeye salmon passing through the net weir will be estimated using Chapman's modification of the Petersen two-sample model (Seber 1982).

A single-stage sampling design, stratified by gear type, will be used to estimate sockeye salmon harvest, and, if possible, fishing effort (Bernard et al. 1998, Cochran 1977). The sport fishery will constitute one stratum, the subsistence fishers using gillnets and seines will comprise another. Given the low number of participants in the fishery, samplers will attempt to interview all participating boat groups.

Age, sex, and length data will be collected from adult sockeye salmon at the weir to describe the biological structure of the population. Scale samples will be prepared for analysis as described by Clutter and Whitesel (1956) and analyzed at the ADF&G Salmon Aging Laboratory in Douglas, Alaska. Age and length data are paired for each fish sample.

Partnerships and Capacity Building

OVK leaders USFS and ADF&G fisheries management biologists have worked together on pro-active management of the Falls Lake fishery. The principal investigator will provide general project oversight, sample design and analysis, reporting, budgets, and proposal development. OVK will to provide input on community issues, natural resource issues, and future direction of the project, employ field technicians, provide the camp and manage a budget for personnel, supplies, and services such as transport.

Justification

This project will support continued operation of the Falls Lake sockeye stock assessment project to estimate the sport and subsistence harvest of sockeye salmon near Falls Lake and the escapement and age, sex, and length composition of sockeye salmon into Falls Lake. This project has been supported with FRMP funds since it began in 2001. Annual escapements of Falls Lake sockeye salmon have been successfully estimated with this fishpass trap-to-above-trap mark-recapture project. The use of a lake net weir and underwater video to sample fish for marks (adipose fin clips) should improve the reliability and efficiency of the escapement estimate. This project is of high strategic importance. This system is in close proximity to significant commercial fisheries, the potential for significant competing harvest is high, subsistence exploitation is high, and the subject of inseason management. This project represents the good collaboration between the Forest Service and the Organized Village of Kake and a reasonable allocation of responsibilities and funding between these entities.

Project Number:	10-610
Project Title:	Kook Lake Sockeye Salmon Assessment
Geographic Region:	Southeast Alaska
Information Type:	Stock Status and Trends
Principal Investigator:	Ben Van Alen, U. S. Forest Service
Co-Investigators:	Raynelle Jack, Angoon Community Association
	Scale Lab, ADF&G Division of Commercial Fisheries

Cost: **2010:** $198,370 **2011:** $189,793 **2012:** $187,253 **2013:** $190,894

Recommendation: Fund

Issue

FRMP funds are needed to continue the Kook Lake sockeye stock status and trends project which began in 2001.

Objectives

1. Estimate the annual escapement of sockeye salmon into Kook Lake using a two weir, four camera system.
2. Estimate the age, length, and sex composition of the sockeye escapement into Kook Lake so that the estimated coefficient of variation for the principal age class is less than 20 percent.

Methods

Project personnel will count the number of upstream migrating adult salmon, trout, and char (by species) that swim into Kook Lake past two cameras on each of two lake net weirs. One of the net weirs will have a trap for sampling sockeye salmon for age, sex, and length data.

Partnerships and Capacity Building

The Angoon Community Association (ACA), ADF&G, and USDA Forest Service have been cooperating on the stock assessment of Kook Lake sockeye salmon since 2001. This project will provide June through September employment for ACA employees who could also work into October on the Sitkoh sockeye stock assessment project. The USFS will seek to fill the project biologist position with a local ANILCA hire.

Justification

This project will use two weirs to estimate annual escapement of sockeye salmon into Kook Lake. Sockeye will be sampled for scale (age), sex, and length data using standard ADF&G methods. The need for escapement estimates of sockeye salmon at Kook Lake was listed as a priority in the 2006 Southeast Alaska Strategic Plan; and was included as a priority information need in the 2010 Request for Proposals. Angoon residents currently must travel farther, to Kook and Sitkoh Lakes, since Kanalku sockeye escapements have been poor. The project will build on the escapement information previously collected at Kook Lake. The budget is commensurate with similar projects in the region. Technical merit is high with clear, measurable and achievable objectives. The investigators have completed projects funded by the FRMP. Partnership and capacity building is rated as medium since the US Forest Service is taking

the lead role in implementing this project and the Angoon Community Association is providing field technicians and some supplies and transportation.

Project Number:	10-611
Project Title:	Redoubt Lake Sockeye Salmon Assessment
Geographic Region:	Southeast Alaska
Information Type:	Stock Status and Trends
Principal Investigator:	Perry Edwards, USFS, Sitka Ranger District
Co-Investigators:	Ben VanAlen, USFS Juneau Ranger District
	Maura Santora, USFS Sitka Ranger District
	Eric Coonradt, ADF&G Division of Commercial Fisheries
	Dave Gordon, ADF&G Division of Commercial Fisheries

Cost: **2010:** $25,000 **2011:** $25,000 **2012:** $25,000 **2013:** $25,000

Recommendation: Fund

Issue

This project will use weir counts and mark-recapture methods to estimate the annual escapements of sockeye salmon (*Oncorhynchus nerka*) into Redoubt Lake, near Sitka, in the Tongass National Forest. Redoubt Lake is the most important source of subsistence salmon for Sitka area residents, with up to 14,000 sockeye per year being harvested in the subsistence fishery. Redoubt Lake escapements are highly variable, ranging from 400 to over 100,000 sockeye. Since 1992, sockeye weir counts have been low enough to close the in-season subsistence fishery seven years, and high enough to increase the subsistence take five years. For years that the fishery has remained open, Redoubt Lake made up an average of 35% of the total sockeye subsistence take in the Sitka area. However, for some of these years Redoubt Lake has provided up to 60% of the total sockeye subsistence take in Sitka.

Operating costs have increased while funding within USFS for the Redoubt Lake weir has been reduced. Managers implementing the Redoubt Lake Sockeye Salmon Management Plan are dependent upon reliable estimates of escapement to maximize subsistence opportunity and to conserve the run in years of poor escapement. Continuation of the weir project will contribute to a spawner/recruit database which dates back 20 years. The need for escapement estimates of sockeye at Redoubt Lake was included as a priority information need in the 2010 Request for Proposals.

Objectives

Estimate the escapement of sockeye salmon into Redoubt Lake so that the estimated coefficient of variation is less than 15%, using a weir at the outlet of the lake with mark-recapture sampling upstream of the weir.

Estimate the age, length, weight, and sex composition of the Redoubt Lake sockeye escapement so that the estimated coefficient of variation for the dominant age class is less than 10%.

Methods

A removable tripod and picket weir with pass boards and a trap will be placed across the outflow of Redoubt Lake to count the number of salmon returning to Redoubt Lake from early June through mid September. Six hundred sockeye salmon will be sampled for age, sex, weight, and length data. Scale sampling and processing methods will follow standard ADF&G procedures.

A mark-recapture study will be conducted to validate weir counts. A running average of 20% of the sockeye salmon counted through the weir each day will be marked with an adipose fin clip. The proportion of marked fish entering the lake will be estimated using net weir and underwater video system at the outlet constriction upstream from the weir.

Partnerships and Capacity Building

Collaboration between the USFS and ADF&G is essential in making this project successful. The USFS will continue to oversee the operation planning and technical report writing. The ADF&G will also continue providing assistance with operational planning, scale reading, and technical support. Daily monitoring and sampling operations in the field will be performed by USFS and ADF&G hired technicians, and a Student Conservation Association (SCA) intern. Letters of support submitted with the Investigation Plan from Sitka Tribe of Alaska (STA) and Sitka Conservation Society (SCS) display the strong community support for this project continuation.

Justification

This project will use two weirs to estimate annual escapement of sockeye salmon into Redoubt Lake. Sockeye salmon will be sampled for scale (age), sex, and length data using standard ADF&G methods. The need for escapement estimates of sockeye at Redoubt Lake was not listed as a priority in the Southeast Alaska Strategic Plan since the work was being accomplished outside the FRMP. However, it was included as a priority information need in the 2010 Request for Proposals. Redoubt Lake was closed to harvest by all users in 2008 due to low escapement. Managers implementing the Redoubt Lake Sockeye Salmon Management Plan are dependent upon reliable estimates of escapement to maximize subsistence opportunity and to conserve the run in years of poor escapement. Sockeye returns will be estimated using proven weir and mark/recapture methods. The project will build on the escapement information previously collected at Redoubt Lake. Technical merit is high with clear, measurable and achievable objectives. The budget is very reasonable due to efficiencies of combining this project with the ongoing fertilization effort. The matching funds are substantial and the amount asked for is less than the 50% funding guideline established by the FRMP for long term projects. The principal investigator has not completed a project funded by the Fisheries Resource Monitoring Program, but one of the co-investigators has. The Forest Service has successfully operated this project for many years. Partnership and capacity building is rated as low since the US Forest Service is taking the lead role in implementing this project with assistance from ADF&G. There is no direct local community group or tribal involvement although the Sitka Tribe of Alaska and the Sitka Conservation Society have written letters of support for the project.

Project Number:	10-612
Project Title:	Neva Lake Sockeye Salmon Assessment
Geographic Region:	Southeast Alaska
Information Type:	Stock Status and Trends
Principal Investigator:	Ben Van Alen, U. S. Forest Service
Co-Investigators:	Johanna Dybdahl, Hoonah Indian Association
	Scale Lab, ADF&G Division of Commercial Fisheries

Cost: **2010:** $157,735 **2011:** $144,829 **2012:** $148,971 **2013:** $153,103

Recommendation: Fund

Issue

FRMP funds are needed to continue the Neva Lake sockeye stock status and trends project which began in 2002.

Objectives

1. Estimate the total escapement of adult and jack sockeye salmon into Neva Lake using weir and mark-recapture methods so that the estimated coefficient of variation is less than 15 percent.
2. Estimate the age, length, and sex composition of the sockeye escapement into Neva Lake so that the estimated coefficient of variation for the principal age class is less than 10 percent.

Methods

We will count the number of upstream migrating adult salmon, trout, and char as they are passed upstream out of a trap mounted on the face of a picket weir installed across Neva Creek. Project personnel will also use a lake net weir and redundant underwater camera/mini-DVR system to count the sockeye escapement into Neva Lake and to examine these fish for the proportion that were adipose clipped at the picket weir as part of the weir-to-above-weir mark-recapture study (see below).

Partnerships and Capacity Building

The Hoonah Indian Association has successfully filled past crew positions with local hires and I anticipate that HIA will hire locally for this project as well. The USFS will seek to fill the project biologist position with a local ANILCA hire.

Justification

This project will use two weirs to estimate annual escapement of sockeye salmon into Neva Lake. Sockeye salmon will be sampled for scale (age), sex, and length data using standard ADF&G methods. The need for escapement estimates of sockeye at Neva Lake was listed as a priority in the 2006 Southeast Alaska Strategic Plan and was included in the 2010 Request for Proposals as a priority information need. Sockeye systems in the Hoonah area are limited. The project will build on the escapement information previously collected at Neva Lake. Technical merit is high with clear, measurable and achievable objectives. The budget is commensurate with similar projects in the region. The investigators have completed projects funded by the FRMP. Partnership and capacity building is rated as medium since the

US Forest Service is taking the lead role in implementing this project and the Hoonah Indian Association is providing field technicians and some supplies and transportation.

2008

FISHERIES RESOURCE MONITORING PLAN



FEDERAL SUBSISTENCE MANAGEMENT

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INTRODUCTION

BACKGROUND

Since 1999, under the authority of Title VIII of ANILCA, the Federal government has assumed management responsibility for subsistence fisheries on Federal public lands in Alaska. Expanded subsistence fisheries management has imposed substantial new informational needs for the Federal system. Section 812 of ANILCA directs the Departments of Interior and Agriculture, cooperating with the State of Alaska and other Federal agencies, to research fish and wildlife and subsistence uses on Federal public lands. To increase the quantity and quality of information available for management of subsistence fisheries, the Fisheries Resource Monitoring Program (Monitoring Program) was created within the Office of Subsistence Management. The Monitoring Program was envisioned as a collaborative inter-agency, inter-disciplinary approach to enhance existing fisheries research, and effectively communicate information needed for subsistence fisheries management on Federal public lands.

> *The mission of the Monitoring Program is to identify and provide information needed to sustain subsistence fisheries on Federal public lands, for rural Alaskans, through a multidisciplinary, collaborative program.*

Original guidance for the Monitoring Program was provided by the Federal Subsistence Board and outlined in the *Operational Strategy for Information Management*[1]. The Regional Advisory Councils (Councils) have identified important issues and information needs for their regions, with review and update on an annual basis. To ensure that the Monitoring Program addresses the highest priority information needs for Federal subsistence fisheries management, the Office of Subsistence Management began a strategic planning process in 2004 to build on the work done by the Councils. Facilitated workshops for the Southwest, Southcentral, and Southeast regions have been held over the last three years with representatives of Federal and State agencies, academia, Alaska Native and rural organizations, and Councils. Participants at each workshop identified fisheries units for their region; developed goals, objectives, and information needs for each fishery unit; and then prioritized fishery units, goals, objectives and information needs. Final workshop reports for the Southeast, Southcentral and Southwest regions have been completed, and results were used to guide the 2008 Request for Proposals. In addition, issues and information needs for salmon were identified for the Yukon[2] and Kuskokwim[3] regions by interagency strategic planning groups.

To implement the Monitoring Program, a collaborative approach is utilized where five Federal agencies (Fish and Wildlife Service, Bureau of Land Management, National Park Service, Bureau of Indian Affairs, and USDA Forest Service) work with the Alaska Department of Fish and Game, Regional Advisory Councils, Alaska Native organizations, and other organizations. An inter-agency Technical Review Committee provides scientific evaluation of proposals and investigation plans. Public review and recommendations for funding are provided through the Councils. An inter-agency Staff Committee

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[1] Krueger, C., Brelsford, T., Casipit, C., Harper, K., Hildebrand, I., Rost, P., Thompson, K., and Jones, L. 1999. Federal Subsistence Fisheries Management: Operational Strategy for Information Management. Report to the Federal Subsistence Staff Committee by the Sub-Committee for the Development of a Blueprint for Interagency Functions, Roles, and Responsibilities. 122 p.

[2] Yukon River Joint Technical Committee. 2005. U.S. and Canada Yukon River Joint Technical Committee Plan. A.T. Publishing and Printing, Inc., Anchorage, AK.

[3] Kuskokwim Fisheries Resources Coalition. 2006. Gap analysis for the Kuskokwim Area salmon research plan. M. Nemeth, editor. LGL Alaska Research Associates, Inc., Anchorage, Alaska.

reviews all recommendations, and reconciles differences between staff and public recommendations. The Federal Subsistence Board (Board) approves annual monitoring plans with the benefit of both a technical recommendation by the Technical Review Committee and public review by the Regional Advisory Councils.

The purpose of this section is to present the Technical Review Committee's funding recommendations for the 2008 Monitoring Plan.

PROJECT EVALUATION PROCESS

The Technical Review Committee evaluates proposals, and subsequently full investigation plans, and makes recommendations for funding. The committee is chaired by the Chief of the Office of Subsistence Management Fisheries Division, and is composed of representatives from each of the five Federal agencies and three representatives from the Alaska Department of Fish and Game. An additional anthropologist from the Minerals Management Service provides additional social science expertise on the Technical Review Committee and provides a balance of disciplines. Fisheries and social science staff from the Office of Subsistence Management provide support for the committee.

Four factors are used to evaluate studies:

1. **Strategic Priority**

   Proposed projects should address the following and must meet the first criteria to be eligible for Federal subsistence funding.

   Federal Jurisdiction—Issue or information needs addressed in projects must have a direct association to a subsistence fishery within a Federal conservation unit as defined in legislation, regulation and plans.

   Conservation Mandate—Risk to the conservation of species and populations that support subsistence fisheries, and risk to conservation unit purposes as defined in legislation, regulation and plans.

   Allocation Priority—Risk of failure to provide a priority to subsistence uses, and risk that subsistence harvest needs will not be met.

   Data Gaps—Amount of information available to support subsistence management (higher priority given where a lack of information exists).

   Role of Resource—Contribution of a species to a subsistence harvest (e.g., number of villages affected, pounds of fish harvested, miles of river) and qualitative significance (e.g., cultural value, unique seasonal role).

   Local Concern—Level of user concerns over subsistence harvests (e.g., upstream vs. downstream allocation, effects of recreational use, changes in fish abundance and population characteristics).

2. **Technical-Scientific Merit**

   The project must meet accepted standards for design, information collection, compilation, analysis, and reporting. Projects should have clear study objectives, an appropriate sampling

design, correct statistical analysis, a realistic schedule and budget, and appropriate products, including written reports. Projects must not duplicate work already being done.

3. **Investigator Ability and Resources**

Investigators must have the ability and resources to successfully complete the proposed study. These are evaluated using the following information for each investigator:

Ability

- Education and training
- Related work experience
- Publications, reports, and presentations
- Past or ongoing work on Monitoring Program studies

Resources

- Office and laboratory facilities
- Technical and logistic support
- Personnel and budget administration

4. **Partnership-Capacity Building**

Partnerships and capacity building are priorities of the Monitoring Program. ANILCA mandates that the Federal government provide rural residents a meaningful role in the management of subsistence fisheries, and the Monitoring Program offers tremendous opportunities for partnerships and participation of local residents in monitoring and research. Investigators are requested to include a strategy for integrating local capacity development in their investigation plans. Investigators must complete appropriate consultations with local villages and communities in the area where the project is to be conducted. Letters of support from local organizations add to the strength of a proposal. Investigators and their organizations should demonstrate their ability to maintain effective local relationships and commitment to capacity building.

POLICY AND FUNDING GUIDELINES

Several policies have been developed to aid in implementing funding.

- Studies must be non-duplicative with existing projects. Most Monitoring Program funding is dedicated to non-Federal sources.
- Activities not eligible for funding under the Monitoring Program include: a) habitat protection, restoration, and enhancement; b) hatchery propagation, restoration, enhancement, and supplementation; c) contaminant assessment, evaluation, and monitoring; and d) projects where the primary objective is capacity building (e.g., science camps, technician training, intern programs). These activities would most appropriately be addressed by the land management agencies.
- Proposals may be funded for up to four years duration.

Finances and Guideline Model for Funding

The Monitoring Program was first implemented in 2000, with an initial investment of $5 million. In 2008, a total of $6.05 million will be allocated to the Monitoring Program. The Department of Interior, through the U.S. Fish and Wildlife Service, annually provides $4.25 million. The Department of Agriculture, through the U.S. Forest Service, annually provides $1.8 million. On an annual basis, this budget funds both continuations of existing studies (year 2, 3 or 4 of multi-year projects), and new study starts. A total

of 43 projects ($3.8 million) previously approved by the Federal Subsistence Board for 2006 and 2007 will be continued in 2008 (Table 1). Descriptions for these projects can be found in the 2006 and 2007 Monitoring Plans. Beginning in 2008, the Office of Subsistence Management will issue future requests for proposals on a biennial basis. The next call will be issued in November 2008 for the 2010–2013 Monitoring Plan. Budget guidelines are established by geographic region and data type, and for 2008, $2.1 million is available for new starts. Proposals are solicited according to the following two data types.

1. **Stock Status and Trends (SST).**

   These projects address abundance, composition, timing, behavior, or status of fish populations that sustain subsistence fisheries with nexus to Federal public lands. The budget guideline for this category is two-thirds of available funding.

1. **Harvest Monitoring and Traditional Ecological Knowledge (HM-TEK).**

   These projects address assessment of subsistence fisheries including quantification of harvest and effort, and description and assessment of fishing and use patterns. The budget guideline for this category is one-third of available funding.

2008 FISHERIES RESOURCE MONITORING PLAN DEVELOPMENT

A Request for Proposals was issued in November 2006 that identified 25 priority information needs for Federal subsistence fisheries management. The Office of Subsistence Management and the Technical Review Committee utilized regional strategic plans to identify priority information needs for each region. Researchers utilized the priority information needs to develop proposals addressing the most important knowledge gaps for the management and regulation of Federal subsistence fisheries.

Fifty-four proposals ($5.0 million) were received in January 2007. These proposals were reviewed by OSM fishery biologists and anthropologists and then the Technical Review Committee. In March of 2007, the Technical Review Committee recommended 34 proposals ($3.2 million) for investigation plan development. In May of 2007, 30 investigation plans ($2.7 million) were submitted for funding consideration. The Technical Review Committee recommended funding 23 projects totaling $2.1 million. Regional Advisory Councils supported the committee's recommendations for all but two of the investigation plans.

The Federal Subsistence Board reviewed the draft 2008 Fisheries Resource Monitoring Plan in December 2007 and selected 23 projects for inclusion in the plan. Subsequent to the Federal Subsistence Board meeting, the Office of Subsistence Management cancelled the lowest priority project, due to budget reductions. Fifteen of the 22 projects funded in 2008 address priority information needs identified in the Request for Proposals. The plan provides 30% of the funding to Alaska Native organizations, 36% to Federal agencies 29% to State agencies and 5% to others (Figure 1).

Tables summarizing the 2008 Fisheries Resource Monitoring Plan are provided on pages 6–10. Descriptions of the projects included in the plan can be found on pages 11–56.

Table 1. 2008 continuation projects approved in 2006 and 2007.

Northern Alaska

06-108	North Slope Dolly Varden Aerial Monitoring
07-105	North Slope Dolly Varden Genetic Baseline Completion
07-151	Northwest Alaska Subsistence Fish Harvest Patterns and Trends

Yukon

06-205	Yukon River Chum Salmon Mixed-stock Analysis
06-252	Yukon Flats Non-Salmon Traditional Ecological Knowledge
07-202	East Fork Andreafsky River Salmon Weir
07-204	Lower Yukon River Salmon Drift Test Fishery
07-206	Innoko River Inconnu Radio Telemetry
07-207	Gisasa River Salmon Weir
07-208	Tozitna River Salmon Weir
07-253	Yukon River Salmon Harvest Patterns

Kuskokwim

06-303	Kuskokwim River Whitefish Migratory Behavior
06-305	Kuskokwim River Inconnu Spawning Distribution
06-306	Lower Kuskokwim River Salmon Inseason Subsistence Catch Monitoring
06-307	Kuskokwim River Salmon Management Working Group
07-302	Kuskokwim River Chum Salmon Run Reconstruction
07-303	Kuskokwim River Salmon Age-Sex-Length Assessment
07-304	Tatlawiksuk River Salmon Weir
07-305	Kanektok-Goodnews Rivers Salmon and Dolly Varden Weirs
07-306	Kwethluk River Salmon Weir
07-307	Tuluksak River Salmon Weir

Southwest Alaska

07-401	Afognak Lake Sockeye Salmon Smolt Assessment
07-402	Buskin River Sockeye Salmon Weir
07-404	Perryville and Chignik Lake Tributaries Salmon Escapement
07-405	McLees Lake Sockeye Salmon Weir
07-408	Togiak River Rainbow Smelt Assessment
07-452	Kvichak Watershed Subsistence Fishing Ethnography

Southcentral Alaska

07-501	Tanada and Copper Lakes Burbot Abundance
07-502	Tanada Creek Salmon Weir
07-503	Copper River Chinook and Sockeye Salmon Abundance
07-505	Long Lake Salmon Weir
07-507	Tustemena Lake Coho Salmon Abundance
07-509	Kasilof River Steelhead Trout Radio Telemetry

Southeast Alaska

06-601	Neva Lake Sockeye Salmon Assessment
06-651	Southeast Alaska Customary Trade of Seafood Products
07-601	Hatchery Creek Sockeye Salmon Assessment
07-604	Klag Lake Sockeye Salmon Assessment
07-606	Hetta Lake Sockeye Salmon Assessment
07-607	Kanalku Lake Sockeye Salmon Assessment
07-608	Klawock Lake Sockeye Salmon Assessment
07-609	Falls Lake Sockeye Salmon Assessment
07-610	Behm Canal Eulachon Genetics
07-651	Hydaburg Sockeye Salmon Customary and Traditional Systems

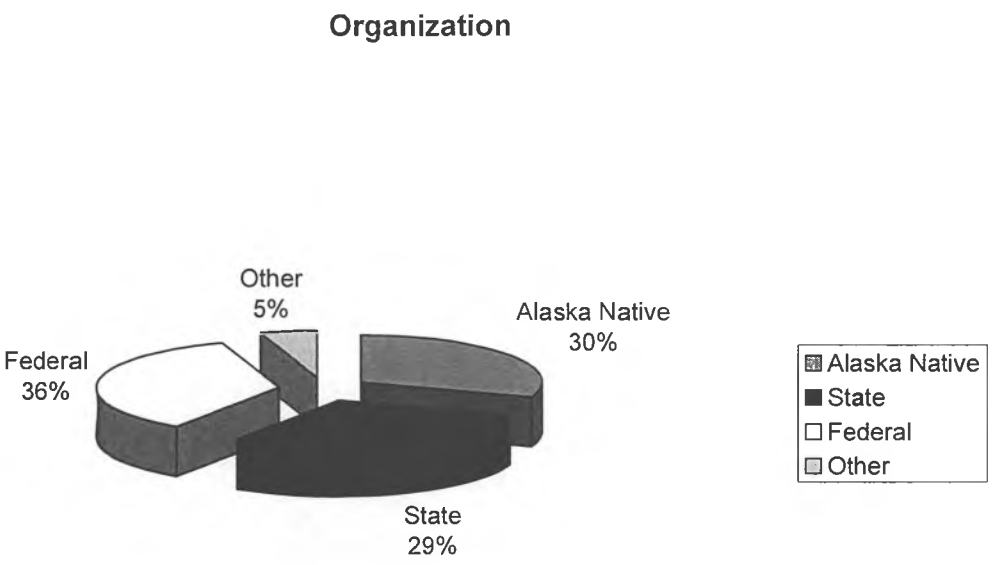


Figure 1. 2008 funding by organization type.

Table 2. Number of projects funded for the 2008 Fisheries Resource Monitoring Plan. Projects include stock status and trends (SST) and harvest monitoring and traditional ecological knowledge (HM-TEK) projects.

Geographic Region	SST	HM-TEK	Total
Northern Alaska	1	0	1
Yukon	4	2	6
Kuskokwim	4	1	5
Southwest Alaska	2	0	2
Southcentral Alaska	4	0	4
Southeast Alaska	2	2	4
Total	17	5	22

Table 3. Cost of projects funded for the 2008 Fisheries Resource Monitoring Plan. Projects include stock status and trends (SST) and harvest monitoring and traditional ecological knowledge (HM-TEK) projects.

	Cost ($000)		
Geographic Region	SST	HM-TEK	Total
Northern Alaska	$87	$0	$87
Yukon	$236	$94	$330
Kuskokwim	$395	$76	$471
Southwest Alaska	$233	$0	$233
Southcentral Alaska	$543	$0	$543
Southeast Alaska	$146	$98	$244
Total	$1,640	$268	$1,908

Table 4. Northern Alaska region project funded in 2008.

Study #	Title	2008	2009	2010	2011
	Stock Status and Trends				
08-103	Kobuk River Sheefish Spawning and Run Timing	$87.3	$78.5	$17.0	$17.0
	Total	$87.3	$78.5	$17.0	$17.0

Table 5. Yukon region projects funded in 2008.

		Approved Budget ($000)			
Study #	Title	2008	2009	2010	2011
	Stock Status and Trends				
08-200	Kaltag Chinook Salmon Sampling	$3.7	$4.0	$4.0	$4.0
08-201	Henshaw Creek Salmon Weir	$43.9	$43.2	$46.2	$52.3
08-202	Anvik River Chum Salmon Sonar Enumeration	$68.7	$71.1	$73.6	$75.9
08-206	Yukon and Kuskokwim Coregonid Strategic Plan	$119.7	$175.7	$0.0	$0.0
	Harvest Monitoring and Traditional Ecological Knowledge				
08-250	Use of Subsistence Fish to Feed Sled Dogs	$42.9	$31.9	$0.0	$0.0
08-253	Yukon River Teleconferences and In-season Monitoring	$51.1	$51.1	$51.1	$51.1
	Total	$330.0	$377.0	$174.9	$183.3

Table 6. Kuskokwim region projects funded in 2008.

Study #	Title	Approved Budget ($000) 2008	2009	2010	2011
	Stock Status and Trends				
08-300	Aniak River Rainbow Trout Seasonal Distribution	$54.6	$38.8	$0.0	$0.0
08-302	Lower Kuskokwim Subsistence Chinook Salmon ASL	$94.0	$117.6	$119.1	$127.5
08-303	George River Salmon Weir	$162.8	$171.5	$150.0	$142.2
08-304	Takotna River Salmon Weir	$83.7	$80.2	$93.4	$118.8
	Harvest Monitoring and Traditional Ecological Knowledge				
08-351	Tuluksak Subsistence Chinook Salmon ASL	$75.5	$79.9	$15.5	$0.0
	Total	$470.6	$488.0	$378.0	$388.5

Table 7. Southwest Alaska region projects funded in 2008.

Study #	Title	Approved Budget ($000) 2008	2009	2010	2011
	Stock Status and Trends				
08-402	Togiak River Chinook Salmon Radio Telemetry	$176.4	$120.7	$0.0	$0.0
08-405	Lake Clark Sockeye Salmon Counting Towers	$56.1	$57.0	$58.3	$59.6
	Total	$232.5	$177.7	$58.3	$59.6

Table 8. Southcentral Alaska region projects funded in 2008.

Study #	Title	Approved Budget ($000) 2008	2009	2010	2011
	Stock Status and Trends				
08-501	Copper River Sockeye Salmon Inriver Abundance	$185.8	$205.4	$0.0	$0.0
08-502	Tustumena Lake Coho Salmon Radio Telemetry & Weirs	$238.3	$118.4	$44.2	$0.0
08-503	Kasilof River Steelhead Trout Radio Telemetry	$78.9	$62.9	$22.4	$0.0
08-504	Crooked & Nikolai Creeks Steelhead Trout Weirs & Video	$40.0	$45.6	$12.6	$0.0
	Total	$543.0	$432.3	$79.2	$0.0

Table 9. Southeast Alaska region projects funded in 2008.

Study #	Title	Approved Budget ($000) 2008	2009	2010	2011
	Stock Status and Trends				
08-600	Karta River Sockeye Salmon Assessment	$111.6	$123.6	$0.0	$0.0
08-607	Unuk River Eulachon Assessment	$34.0	$36.4	$0.0	$0.0
	Harvest Monitoring and Traditional Ecological Knowledge				
08-650	POW Island Steelhead Trout Subsistence Harvest Survey	$70.4	$74.0	$0.0	$0.0
08-651	Maknahti Island Subsistence Herring Fishery Assessment	$27.2	$42.0	$0.0	$0.0
	Total	$243.2	$276.0	$0.0	$0.0

Project Number:	08-103
Project Title:	Kobuk River Sheefish Spawning and Run Timing
Geographic Region:	Northern Alaska
Data Type:	Stock Status and Trends
Principal Investigator:	Klaus Wuttig, ADF&G Sport Fish Division
Co-Investigator(s):	Randy Brown, USFWS, Fairbanks Fish and Wildlife Field Office

Cost: **2008:** $87,299 **2009:** $78,534 **2010:** $17,011 **2011:** $17,011

Issue

The Kobuk River sheefish *Stenodus leucichthys* population supports a very substantial winter subsistence harvest that occurs in Hotham Inlet and Selawik Lake, and significant in-river subsistence and sport fisheries. Most sheefish are harvested in Hotham Inlet and Selawik Lake where the population is comprised of two discrete spawning populations, the Selawik and Kobuk River populations. The exploitation of these stocks is poorly understood due to incomplete estimates of total annual harvest, unknown stock composition in the mixed-stock winter fisheries, and unknown total exploitable stock abundance. An understanding of these basic elements is necessary to begin to describe the population dynamics of these stocks and identify sustainable harvest levels. Population monitoring is only feasible in river on the individual spawning populations, and estimates have been attained in the Kobuk River during 1995-1997, and in the Selawik River during 1995–1996 and 2004–2005. However, these spawning population estimates are problematic because an unknown but potentially significant proportion of mature fish from each population do not spawn annually and are therefore not enumerated. Prior to additional stock assessments, a better understanding of spawning locations, run timing, and particularly spawning frequency is needed. Estimates of spawning frequency are critical in determining whole population sizes based on in-river spawning population estimates (past and future) and precise descriptions of run timing and spawning locations would provide the basis for improving the design of mark-recapture techniques and provide valuable information for assessing the feasibility of using sonar technology for future enumeration work.

Objectives

1. Document spawning locations within the Kobuk River upstream of the village of Kobuk.
2. Describe the timing of spawning migrations (upstream and downstream) for mature sheefish within the Kobuk River drainage.
3. Estimate the proportion of the sheefish spawning population in 2008 and 2009 that returned annually to spawning areas upstream of the village of Kobuk from 2009 to 2013 such that each annual proportion is within 10% percentage points 90% of the time.
4. Identify and characterize different spawning frequency strategies used by adult sheefish in the Kobuk River, estimate the proportion of adults for each strategy, and estimate the potential variation in the proportion of adult sheefish spawning in any one year.

Methods

During 2008 and 2009, 130 sheefish will be surgically implanted with radio tags each year. Deploying tags over two years will guard against potential temporal variation. Because the spawning population returns to a single, discrete spawning area (i.e. hydrologic unit), behavioral-related differences such

as spawning frequency and selection of spawning areas is not expected to be a function of run timing. Nevertheless, efforts will be made to distribute radio tags in proportion to run strength to help ensure a more random sample. Sex-related differences in spawning behavior are more likely and therefore attempts will be made to distribute radio tags equally among males and females as the run progresses. Radio tags will be operational annually from mid June to mid November over a five-year period. Data related to movements, run-timing and spawning locations will be collected using a combination of aerial tracking surveys, ground-based receiving stations and boat surveys. At a minimum, each cohort of 130 radio-tagged sheefish will be monitored over a four-year period.

Partnerships/Capacity Building

This project is a cooperative effort between ADF&G, USFWS and the National Park Service (NPS), each providing significant in-kind support. Maniilaq and the villages of Shungnak and Kobuk support this project. At least one local hire will be formally employed by ADF&G to assist with sampling of fish and maintenance of tracking stations, and efforts will be made to utilize and compensate locals for logistical support (e.g. boat rentals, boat drivers, and land leases). Developing a trusting relationship among regional communities is vital for project success and future application of study results in sheefish management. To help establish trust, a long-term (2008–2013) educational program on sheefish will be designed to develop strong community interest/support, educate the students and adults about sheefish and the project, and develop fisheries skills in the community. The program will be administered by the ADF&G Rural Outreach Education Program in Kobuk and Shungnak where students will: 1) learn about sheefish and the project; 2) participate in hands-on activities such as practicing surgeries and maintaining their own tracking station in town; 3) monitor the progression of the spawning migration annually "real-time" using all data collected (i.e. aerial surveys and tracking station data); and 4) develop their own synthesis of what they have learned into a presentation to be shared with their community - locally and regionally.

Justification

The proposed work is technically sound and addresses an important subsistence sheefish fishery associated with Gates of the Arctic National Preserve, Selawik National Wildlife Refuge, Kobuk Valley Wilderness Area and Kobuk Valley National Park. Exploitation of sheefish is poorly understood, yielding incomplete information on stock abundance, stock composition, and annual harvest. Results from this work will describe run timing and spawning frequency, giving fishery managers the context for understanding previously completed stock abundance work. Furthermore, information gained in this project will provide a basis for developing future stock assessment projects. This project provides fundamental information needed to manage and sustain subsistence fisheries that target these stocks.

Project Number: 08-200
Project Title: Kaltag Chinook Salmon Sampling
Geographic Region: Yukon
Data Type: Stock Status and Trends
Principal Investigator: Richard Burnham, City of Kaltag

Cost: **2008:** $3,750 **2009:** $4,000 **2010:** $4,000 **2011:** $4,000

Issue

Knowledge of Chinook salmon mixed stock harvests are a prerequisite to understanding and evaluating changes to stock-specific production. This project helps fulfill the US-Canada Treaty Agreement by estimating the age, sex, length (ASL), and stock composition for the fishery in Subdistrict 4-A. Federal and State managers rate this project as a high strategic priority. The Office of Subsistence Management supported this project in 2001 (01-050), 2004–2006 (04-234) and 2007.

Objectives

1. Collect biological data from 250 Chinook salmon harvested by Kaltag subsistence fishers. These data include scales, sex, length, and an axillary process clip.
2. Record associated data such as date, harvest location, gear type, and mesh size.

Methods

1. ***Study design:*** Chinook salmon will be sampled in the round from the Kaltag subsistence harvest as soon after capture as practical. Sampling will occur throughout the duration of the run in proportion to abundance as much as possible. During sampling, all available fish will be sampled for an axillary process clip, scales, sex, and length. Capture method, mesh size, location, date, fish number, scale card number, and genetic vial number will be recorded.
2. ***Data collection and reduction:*** ADF&G will send sampling supplies to Kaltag before the field season begins in late May. Sampling technicians will be hired before the field season. Sample collection will begin as soon as subsistence fishers start harvesting salmon, usually early to mid-June.

   Three scales are collected from the left side of the fish, two rows above the lateral line on the diagonal from the posterior insertion of the dorsal fin to the anterior insertion of the anal fin, and then mounted on pre-printed gum cards. Length will be measured from mid-eye to fork of tail to the nearest five mm. Sex will be visually determined from external morphological characteristics or from internal examination of the gonads. Approximately ¾-inch of the auxiliary process is clipped, placed in individually numbered vials, and the vial filled with ethanol. Associated data are recorded in field logbooks and later transferred to Opscan forms. After the majority of the Chinook salmon subsistence harvest has occurred, samples and associated data will be will be sent to the ADF&G Anchorage office for processing and database entry.

3. ***Data reduction:*** From August through December, samples will be processed, analyzed and summarized by ADF&G. ASL data will be compiled by the Stock Biology Laboratory and the axillary process clips will be compiled by the Genetics Laboratory to estimate stock composition for Canadian- and US-origin fish. Upon completion of sample processing and analysis, ADF&G will

forward preliminary results to the principal investigator for inclusion in performance, annual, and final reports. ADF&G final reports, which include data collected by the principal investigator, will be forwarded to the PI when available.

Partnerships/Capacity Building

The project directly involves Kaltag residents collecting in-season fisheries data from the subsistence Chinook salmon harvest and is in partnership with the Alaska Department of Fish and Game.

Justification

The project addresses an information need identified in the 2008 Request for Proposals. The project supplements the commercial ASL database by providing 250 samples from subsistence caught Chinook salmon in Subdistrict 4A. The scope of work is reasonable and the objectives are clear, measurable, and achievable. The project provides for direct involvement of a local community (two local hire technicians) in the collection of in-season fisheries data on the subsistence harvest. The project is reasonably priced and the information collected benefits the post-season evaluation of Chinook salmon. Federal and State managers have supported, and the Office of Subsistence Management has provided funds for, this continuation project since 2001.

Project Number: 08-201
Project Title: Henshaw Creek Salmon Weir
Geographic Region: Yukon
Data Type: Stock Status and Trends
Principal Investigator: Brandy Berkbigler, Tanana Chiefs Conference

Cost: **2008:** $43,872 **2009:** $43,215 **2010:** $46,230 **2011:** $52,280

Issue

Management of Koyukuk River salmon fishery is complex due to the limited number of escapement studies in the drainage. The Alaska Department of Fish and Game, Commercial Fisheries Division has conducted aerial surveys within this drainage since 1960 but the usefulness and reliability of that information s limited. Due to the mixed stock nature of the Yukon River salmon fishery, management practices are complex and the data needed for management must be collected throughout the drainage. The United States Fish and Wildlife Service (USFWS), Fairbanks Fish and Wildlife Field Office have compiled salmon escapement data from Henshaw Creek since 2000. The information collected (genetic fin clips, age, sex, and length) has allowed Federal and State managers to bridge the information gap between projects on the Koyukuk River. The Henshaw Creek weir is the only upper Koyukuk River drainage escapement project and can be used to compare with lower Koyukuk river escapement projects. Chinook *Oncorhyncus tshawytscha* and chum *O. keta* salmon from Henshaw Creek contribute to the subsistence and commercial fisheries harvest occurring in the Yukon River drainage. Subsistence and commercial harvesters along the Yukon and Koyukuk Rivers have identified a concern with the apparent decrease in the size of Chinook salmon. The usefulness in maintaining reliable escapement estimates and continued collection of age, sex and length data at Henshaw Creek will help to assess possible trends in Chinook and summer chum salmon run timing and escapement over time. This project addresses the priority information needs outlined for Yukon River salmon, including maintaining reliable estimates of Chinook and chum salmon escapement over time, and assessment of trends in Chinook age, sex and length. Additionally, with Tanana Chiefs Conference (TCC) as the primary investigator and through the hire of local residents, this project will satisfy the capacity building component addressed in the RFP for Native entities to effectively manage the resources.

Objectives

1. Determine daily run escapement and run timing of adult salmon.
2. Determine age, sex, and length composition of adult salmon.
3. Determine the number of resident fish passing the weir.
4. Serve as an outreach platform for Kanuti National Wildlife Refuge (KNWR) staff and TCC Partners Program fisheries biologist to conduct an onsite science camp.

Methods

A resistance board weir will be installed and operated on Henshaw Creek each year from 2008–2011. A live trap, installed near mid-channel, will allow salmon and resident species to migrate through the weir, where their passage will be enumerated daily and from where fish will be sampled to collect biological information. The weir will be operational from approximately the third week of June until the middle of August. A fish trap will be used to collect and sample salmon for age, length, and sex as they migrate

upstream as well as document the presence of resident fish. Escapement counts will be forwarded to the USFWS office daily. A camp will be established in association with the weir for the crew. The crew will consist of four people on site for the project duration. There will be high emphasis on local hires, most notably from those villages within the vicinity of the study site (Allakaket, Alatna, Bettles, Hughes, and Huslia). Henshaw Creek will also serve as a platform for a one week science camp with KNWR.

Partnerships/Capacity Building

This project has consulted with the Evansville Tribal Council in Bettles / Evansville to rent vehicles that will provide assistance in pre and post season logistics. There has also been consultation with KNWR to provide, in kind support with over wintering storage facilities for gear and annually being a participant in a science camp hosted at Henshaw Creek weir through a Challenge Cost Share Grant with KNWR. TCC will work with refuge staff, the Western Regional Advisory Council, Allakaket, Alatna, Hughes, and Evansville traditional councils to recruit locals. Local community support will be elicited through members at the annual TCC meeting of delegates. This project has been successful in hiring the required weir staff from the local village of Allakaket and plans to keep hiring locally within the communities of the Koyukuk River Drainage.

Justification

The Henshaw Creek weir is the only upper Koyukuk River drainage escapement project and is valuable in providing data to effectively manage the subsistence Yukon salmon fisheries. It provides an educational opportunity to rural students to learn about fisheries science and careers in natural resource management. The project has reached the highest level of capacity building and is a model for future projects in this arena.

Project Number: 08-202
Project Title: Anvik River Chum Salmon Sonar Enumeration
Geographic Region: Yukon
Data Type: Stock Status and Trends
Principal Investigator: Carl Pfisterer, ADF&G
Co-Investigator: Malcolm McEwen, ADF&G

Cost: **2008:** $68,668 **2009:** $71,051 **2010:** $73,554 **2011:** $76,181

Issue

The Anvik River contributes to the subsistence chum salmon fishery in the lower Yukon River, which is part of the Yukon Delta National Wildlife Refuge. The Anvik River sonar project has provided reliable estimates of chum salmon escapement to the Anvik River since 1979, is one of only two projects in the Yukon River drainage with an established Biological Escapement Goal (BEG) for summer chum salmon, and was identified in the 2008 FRMP as an important priority need in the Yukon Region for maintaining reliable estimates of chum salmon escapement over time. The sonar project's longevity and the river's history of being one of the largest producers of summer chum salmon in the Yukon River drainage combine to make this one of the most important projects for escapement monitoring and management of chum salmon in the Yukon Region.

Objectives

1. Estimate the daily summer chum salmon escapement passing the Anvik River sonar site.
2. Estimate the age and sex composition of the summer chum salmon spawning escapement.

Methods

Objective 1: The Anvik River sonar project will transition to operating a Dual Frequency Identification Sonar (DIDSON) in 2007. The DIDSON produces video like images of fish passing the site. Sonar will be deployed on each bank of the Anvik River and sonar data will be collected for 30 minutes of each hour, 24-hours per day, 7 days a week for the duration of the study. This will provide a total of 12 hours of data per day per bank. Counts will be expanded for the fraction of the day sampled to estimate daily passage.

Objective 2: For age and sex composition, a sample of 162 summer chum salmon will be collected in each of the following time strata: June 17–30, July 1–7, July 8–14, and July 15–30. Scale sample cards and mark-sense forms will be sent to Anchorage for processing at the conclusion of the season. A field notebook will be maintained recording sex, length, date, and gear type for each fish sampled.

Partnerships/Capacity Building

This project provides limited opportunities to develop partnerships and build local capacity. Information from this project is provided to both State and Federal fishery managers and is used in making daily summer chum salmon management decisions. In addition, the data are presented at Yukon River Fisheries Association teleconferences when discussing management actions with subsistence and commercial fishermen.

Justification

This project addresses an information need specifically identified in the 2008 Request for Proposals. The Anvik River is one of the top producers of summer chum salmon in the Yukon River accounting for approximately one third of total production. Approximately 74% of the total subsistence harvest for summer chum salmon occurs in the lower Yukon River. The Anvik River Sonar is an important monitoring project for summer chum salmon to assess run strength and meet biological escapement goals. Because of its 28-year funding history by the State, and the importance of the information to both State and Federal managed fisheries, OSM requires a 50% match by the State in the investigation plan, which is covered by 10.8 months of salary per year of three permanent ADF&G Fishery Biologists ($84,000+).

Project Number:	08-206
Project Title:	Yukon and Kuskokwim Coregonid Strategic Plan
Geographic Region:	Yukon
Data Type:	Stock Status and Trends
Principal Investigator:	Randy Brown, USFWS, Fairbanks Fish and Wildlife Field Office
Co-Investigator:	Caroline Brown, ADF&G Subsistence Division

Cost: **2008:** $119,737 **2009:** $175,727 **2010:** $0 **2011:** $0

Issue

Six whitefish species are commonly recognized in the Yukon and Kuskokwim rivers; sheefish *Stenodus leucichthys*, broad whitefish *Coregonus nasus*, humpback whitefish *C. pidschian*, Bering cisco *C. laurettae*, least cisco *C. sardinella*, and round whitefish *Prosopium cylindraceum.* Major subsistence fisheries take place for sheefish, broad whitefish, humpback whitefish, and Bering cisco at various locations and seasons. Least cisco and round whitefish are also harvested in subsistence fisheries but are generally not as specifically targeted as the others. At this time, no formal monitoring or management programs have been developed in the region for subsistence whitefish fisheries. In fact, our current understanding of whitefish life history and population biology in most areas of the Yukon and Kuskokwim regions is not sufficient to allow monitoring or management programs to be developed.

Geographic distributions of the whitefish species are reasonably well documented in a wide array of formal and informal fish survey reports, and in the general fish guidebooks for the region (McPhail and Lindsey 1970; Morrow 1980; Mecklenberg et al. 2002); however, species and stock-specific data on migrations, spawning habitats, rearing habitats, abundance, harvest levels, and other related information are insufficiently described. A strategic action plan for whitefish species will provide direction for research on these fish important for subsistence by outlining our current understanding of whitefish and whitefish fisheries within the two drainages, identifying information required for monitoring and management, highlighting gaps in biological and life history data, discussing major fisheries issues within the two drainages, and suggesting appropriate methods and approaches for research. Ultimately, an improved understanding of these species will enable the development of effective monitoring and management plans.

Objectives

Develop a strategic plan for research of whitefish species for the Yukon and Kuskokwim river drainages. This plan will include six major components:

1. a review of whitefish fisheries within the two drainages;
2. a review of the biological, life history, and ethnographic studies that have occurred in the region;
3. an assessment of data gaps;
4. a review of methods and approaches that have been used around the world to monitor and manage whitefish species with an assessment of their appropriateness for use in Alaska;
5. a discussion with stakeholders and other interested parties of issues, fisheries, and species of regional concern; and

6. writing and critical review of a strategic plan for whitefish research in the Yukon and Kuskokwim regions.

The plan will aim to provide a region-wide perspective to guide future whitefish research.

Methods

The proposed approach includes several major components, as outlined above. Initially the principal investigators will conduct background research and synthesis of biological and ethnographic studies, documentation of traditional knowledge, harvest data, and management reports. These syntheses will be distributed to a group of delegates with experience in fish biology, anthropology, and fish management, as well as representatives from fishery user groups in the Yukon and Kuskokwim regions. A series of meetings will be convened with these delegates to discuss and debate the information presented in the syntheses, and prioritize critical research needs and approaches. The principal investigators will consider the information from all sources and prepare a strategic plan for research of coregonid species for the Yukon and Kuskokwim river drainages.

Partnerships/Capacity Building

A number of potential participants from several organizations have been contacted to assess the interest level in the proposal project, and responses have been favorable. The contact list includes individuals from the Alaska Department of Fish and Game, the U.S. Fish and Wildlife Service, Alaska Department of Natural Resources, the Association of Village Council Presidents, Tanana Chiefs Conference, the Council of Athabascan Tribal Governments, the Kuskokwim Native Association, and the Yukon River Drainage Fisheries Association. In addition, a representative from the Yukon-Kuskokwim Delta, Western Interior, and Eastern Interior Regional Advisory Councils will be invited to participate in the meetings. Letters of support have been requested from a number of organizations.

Justification

This proposal addresses a priority information need identified in the 2008 Request for Proposals. Subsistence whitefish fisheries are second only to salmon in importance as a food resource for the Yukon and Kuskokwim rivers. With little information available about basic stock structure and life history information, subsistence management for whitefish stocks remains largely passive. The proposed study would identify biological and social science gaps in existing information, and explore appropriate methods for assessment, research, and management. Additionally, the group would develop criteria that could be used to assign relative priority levels among fisheries, species, user-groups, research objectives, and management options. The end product will be a peer reviewed strategic plan for research of whitefish species for the Yukon and Kuskokwim river drainages that can be used to direct future coregonid research and funding.

Project Number: 08-250
Project Title: Use of Subsistence Fish to Feed Sled Dogs
Geographic Region: Yukon
Data Type: Harvest Monitoring and Traditional Ecological Knowledge
Principal Investigator: David Andersen, Research North
Co-Investigator: Cheryl Scott, Alaskan Connections

Cost: **2008:** $42,921 **2009:** $31,920 **2010:** $0 **2011:** $0

Issue

It has been 16 years since the use and feeding of sled dogs has been systematically examined in the Yukon River drainage. A 1991 ADF&G study found that approximately 5,000 sled dogs in 32 Yukon River communities were being maintained to varying degrees using subsistence-caught fish and that more than 250,000 small salmon were being utilized each year to feed dogs. In the intervening decade and a half, salmon runs and salmon harvests have declined, sometimes dramatically. In 2000, the total subsistence harvest of Yukon River small salmon was estimated at less than 100,000 fish with an estimated 21,000 salmon utilized for dog food. It seems improbable that dog team owners heavily reliant on salmon to feed their dogs could cope with such significant reductions in salmon harvests without reducing kennel size or altering long-standing feeding practices, or both. The effects of these changes on the size, number, and use of dog teams in rural communities are unknown. The baseline data set collected in 1991 provides a rare opportunity to examine the dynamics of one of the more significant uses of subsistence-caught fish in interior Alaska during a time of unprecedented change. This study proposes to update the 1991 data set using the same methods and communities, to understand what changes have occurred with regard to village dog teams and the strategies mushers have utilized to feed them. Current information on this important issue will help Federal managers to be proactive and to better understand factors affecting subsistence fisheries along the Yukon River.

Objectives

1. Estimate the number of sled dogs in rural Yukon River Communities.
2. Describe contemporary uses of dog teams in Yukon River Communities.
3. Assess the extent to which subsistence-caught fish (salmon and non-salmon) are used to feed dogs.
4. Compare these data with data gathered in 1991 to assess changes and evaluate implications for subsistence management.

Methods

A two-year project is proposed, sampling the same seven study communities and using the same basic methodology as the 1991 study in order to achieve a comparable data set and assess specific changes. The project will utilize standard ethnographic research methods including face-to-face household surveys conducted with all dog-team owners in each survey community and key respondent interviews with a small subset of dog-team owners. Research practices will adhere to recognized social science ethics standards and principles for the conduct of research in the Arctic. The seven study communities proposed for sampling are: Fort Yukon, Huslia, Kaltag, Manley Hot Springs, Russian Mission, St. Marys, and

Tanana. Together, these communities are thought to represent the diversity of the Yukon River drainage in terms of geography, Native cultures, fishery resources, and participation in dog mushing activities.

Partnerships/Capacity Building

Community partnerships will be encouraged and enhanced through the hiring of local assistants in each community. Local assistants will be instrumental in identifying survey households and will accompany and assist the researcher during survey and interview sessions. Although the duties of each local assistant are expected to involve only 10–15 hours of work over a several day survey period, participation as the local assistant will provide that individual with important insight into social science data collection methods and will build capacity by contributing to the work experience, or expanding the pool, of individuals in rural communities familiarized with this kind of work.

Justification

This project is recommended for funding. The investigation plan addresses an important issue for Federal subsistence fisheries management, and will provide a diachronic perspective much needed to understand changing subsistence practices and inform subsistence management in an area with numerous conservation units. The project is technically sound, with solid objectives and proven methodology. The time frame and budget are reasonable. Investigators are uniquely well qualified to conduct the proposed work, as they did the original study 16 years ago.

Project Number:	08-253
Project Title:	Yukon River Teleconferences and In-season Monitoring
Geographic Region:	Yukon
Data Type:	Harvest Monitoring and Traditional Ecological Knowledge
Principal Investigator:	Jill Klein, Yukon River Drainage Fisheries Association
Co-Investigator:	Jonathon Gerken, USFWS Fairbanks Fish and Wildlife Field Office

Cost: **2008:** $51,000 **2009:** $51,000 **2010:** $51,000 **2011:** $51,000

Issue

The proposed project deals with an important subsistence resource (salmon) in an area with multiple Federal conservation units. Improving management of this resource and finding ways to incorporate users and local knowledge into resource management is a priority for the Yukon-Kuskokwim Delta, Western Interior, and Eastern Interior Regional Advisory Councils , management agencies and tribal organizations. In-season teleconferences and in-season harvest interviewers are a practical method for improving communication and bringing these entities together.

Objectives

1. Maintain and expand communication and information sharing between the Yukon salmon fishery users and agency staff through weekly in-season teleconferences.
2. Promote local involvement in Yukon River fisheries management through capacity building and participation.
3. Promote inter-agency information sharing for Yukon River salmon fisheries with State, Federal and international entities (i.e., ADF&G, U.S. Fish & Wildlife Service, Yukon River Salmon Committee, Canada and Department of Fisheries and Ocean, Canada).
4. Foster increased participation, timely sharing and uniform reporting of in-season information from fishers to managers and vice versa.
5. Document local salmon run timing and perceived abundance of salmon in the Yukon River drainage through summer and fall fishing seasons.
6. Estimate the weekly average subsistence harvest progress for Chinook salmon in 10 communities within the drainage.

Methods

Teleconference calls will be facilitated once a week during the 2008–2011 fishing seasons by the YRDFA Executive Director and/or staff on every Tuesday of the season at 1300 hours (Alaska Time). Following each call YRDFA will distribute a short summary, detailing announcements of the management decisions, management rationale and key points of subsistence users and public.

The inclusion of in-season harvest interviewers as consistent participants in the teleconference calls will provide a greater consistency in reporting subsistence harvest information. Ten interviewers will be selected and hired by YRDFA from the communities of Emmonak, Marshall, Holy Cross, Kaltag, Huslia, Allakaket, Galena, Beaver, Circle, and Eagle. Interview methodology and information collection

will follow the methods outlined by Gerken and Holder (2005). Preseason training will occur to ensure interviewers are collecting information appropriate to the methodology.

Partnerships/Capacity Building

Teleconferences are a practical method for bringing together a diverse group of local users that utilize and manage the salmon resource. However, participation in each teleconference call varies dependent upon salmon run timing and management actions. A summary of attendance on the 2006 teleconferences indicated that community attendance declined throughout the season after the historical quarter point of the run, June 15, in the lower river, traditionally the beginning of commercial fishing in the lower river. Similarly, an increase in community attendance was observed prior to the first fall season commercial period occurring on July 28. The use of teleconferences to promote information sharing is a valuable tool if communities participate, but without attendance the utility is diminished.

Justification

The Technical Review Committee recommends funding Option B of this project pending modifications as outlined above. Specifically, investigators need to correctly characterize how the information will be used, and also revise objectives to include no more than three. The project addresses an important subsistence resource (salmon) in an area with multiple Federal conservation units. Improving management of this resource and finding ways to incorporate users and local knowledge into the management of this resource has been a priority of the three area Regional Advisory Councils (Western Interior, Eastern Interior and Yukon-Kuskokwim Delta). The project is a collaborative effort, and investigators have the capability to successfully conduct the project. The methods are basic, but overall the project is technically sound and the budget is reasonable.

Project Number:	08-300
Project Title:	Aniak River Rainbow Trout Seasonal Distribution
Geographic Region:	Kuskokwim
Data Type:	Stock Status and Trends
Principal Investigator:	Klaus Wuttig, ADF&G Sport Fish Division
Co-Investigator:	Corey Schwanke, ADF&G Sport Fish Division
	Dave Orabutt, Kuskokwim Native Association
	Derek Radar, Kuskokwim Native Association

Cost: **2008:** $52,284 **2009:** $37,182 **2010:** $0 **2011:** $0

Issue

The rainbow trout *Oncoryhnchus mykiss* population in the Aniak River contributes significantly to the local subsistence harvest of freshwater fish and also supports an increasingly popular rainbow trout sport fishery. Customary and traditional use determinations of rainbow trout are in Federal regulation for the nearby communities of Aniak, Chuathbaluk, and Upper and Lower Kalskag. Currently, there is a strong local concern about an apparent large decline in the population of rainbow trout in the Aniak River since the mid 1980s. Historic and baseline information on their life history, abundance, and stock composition does not exist and is needed to formulate and implement regulations to properly manage the rainbow trout for the purpose of satisfying a diversity of user groups while ensuring long-term sustainability. Therefore, the goal of this study is to collect information on the seasonal movements of rainbow trout in the Aniak River to determine if discrete stocks exist within the drainage. In the absence of abundance-based information, quantifying rainbow trout movements will help to identify the distribution(s) of those fish affected by the subsistence and sport fisheries. The telemetric data, survey or catch information attained during radio-tagging operations, and interviews are needed in designing a mark-recapture experiment to estimate population size to address relevant issues such as population closure, timing of sampling, and selection of index areas.

Objectives

1. Describe the seasonal (summer 2008 to winter 2009/2010) distributions of mature sized rainbow trout ≥420 mm FL in the Aniak River implanted with radio transmitters during the summer feeding period when rainbow trout distributions are most widespread.
2. For each of the four hydrologic units (Salmon River, Kipchuk River, the East Fork Aniak River to the Kipchuk River, and mainstem Aniak River from the Kipchuk River to the Buckstock River) estimate the proportion of radio-tagged rainbow trout that remained in the hydrologic unit where they were tagged. These estimates will be made for each aerial tracking survey and each estimated proportion will be within 25 percentage points of the true value 95% of the time.

Methods

During the summer of 2008, 125 rainbow trout will be radio-tagged during the peak spawning period of Chinook and chum salmon (late July–early August). Radio tags will be systematically deployed throughout what is believed to most (e.g., >90%) of their summer distribution. These fish will be monitored over an approximately 18-month period and will be used to describe seasonal movement patterns, locate significant spawning and overwintering areas, and identify potentially unique stocks within the drainage that may be differentially affected by the subsistence and sport fisheries.

Partnerships/Capacity Building

KNA and ADF&G, Sport Fish Division, have developed a meaningful relationship through the Chinook salmon telemetry projects on the Kuskokwim and Holitna Rivers (FIS 02-046 and 05-302). This developing relationship is vital to develop local support for this project, particularly in the interpretation of the data collected for formulating future regulations or management plans. KNA is very supportive of this project, are co-investigators on this project, and will have direct, meaningful participation in field work, project planning, report reviewing, and community outreach. KNA has agreed to provide an intern and technician for the field work, and in communities most affected, to coordinate local outreach efforts including traditional council or community meetings, regional meetings, school visits, and news letters/ articles. Consultations with the Yukon Delta National Wildlife refuge are ongoing and the refuge has agreed to provide in-kind support (e.g., use of aircraft for aerial surveys).

Justification

This is a well designed study that potentially could address a long term resource issue. The investigators are qualified and experienced in conducting this type of project. The technical merit, investigator ability and partnership and capacity building component of this investigation were all rated high. The investigators addressed study design concerns raised by the TRC in the 2006 IP review. Local concern over stock declines observed by subsistence fishermen raises the potential for regulatory action for the Federal Subsistence Board. Information on basic stock biology of Aniak River rainbow trout will be necessary to evaluate the sustainability of current subsistence harvest levels and the potential harvests from the catch and release sport fishery. Matching funds of over $95,000 by ADF&G make this project very compelling.

Project Number:	08-302
Project Title:	Lower Kuskokwim Subsistence Chinook Salmon ASL
Geographic Region:	Kuskokwim
Data Type:	Stock Status and Trends
Principal Investigator:	Doug Molyneaux, ADF&G Commercial Fisheries Division
Co-Investigator:	Greg Roczicka, Orutsaramiut Native Council

Cost: **2008:** $90,923 **2009:** $112,305 **2010:** $113,772 **2011:** $121,920

Issue

About 80% of the Kuskokwim River Chinook subsistence harvest is taken from the lower river, which is within the boundaries of the Yukon Delta National Wildlife Refuge. The 2008 Request for Proposals seeks projects that quantify and assess subsistence salmon harvest in the region, and there is special need to also quantify the annual age, sex, and length (ASL) composition of the subsistence harvest. In addition, managers must consider the ASL composition of the spawning escapement and commercial harvest when formulating fishery management strategies. Chinook salmon mature and return to spawn over a wide range of ages, and the array of age classes span a size range much broader than any other salmon species. Kuskokwim River subsistence fishers harvest a large fraction of the total annual Chinook salmon run, and these fishers commonly employ practices that selectively take the larger and older fish. One of the consequences of this selective harvest practice is that it leaves a higher proportion of smaller Chinook salmon to spawn each year. Managers are concerned about hereditary implications of this practice that could lower the average age and size of maturity of future generations of Chinook salmon returns. In addition, there is concern that selective harvest practices removes a disproportionate fraction of female Chinook and that this removal could result in critically low egg deposition, especially in years of low escapement. Not withstanding these concerns, subsistence fishers clearly prefer to harvest large Chinook.

Also at issue is how the subsistence fishery is impacted by the commercial fishery. The Alaska Board of Fisheries (BOF) reestablished a directed commercial fishery for Chinook in the lower Kuskokwim River during their January 2007 meeting, and gave managers the option to allow use of gillnets with up to 8-inch stretched mesh sizes (large mesh), a practice that has not been allowed since 1984. The default option is to restrict commercial fishers to using 6-inch or smaller mesh size (small mesh). The selectivity of small mesh web in the commercial fishery actually has a strong mitigating effect to the large mesh web preferred by subsistence fishers.

The potential of a commercial fishery with large mesh web has raised concerns among Federal subsistence users that the commercial fishery would directly compete with subsistence fishers for the same segment of the Chinook salmon run—large fish, and would progressively reduce the availability of larger Chinook salmon to upstream subsistence users. A large mesh commercial fishery would also compound the impacts of selective harvest practices described above for the subsistence fishery.

Objectives

1. Describe the annual ASL composition of Chinook salmon in the lower Kuskokwim River subsistence harvest.
2. Characterize the annual ASL composition of Chinook salmon in the lower Kuskokwim River subsistence harvest by gear type (i.e., gillnets with mesh of 6 inches or smaller, gillnets with mesh between 6 and 8 inches, gillnets with mesh of 8 inches or larger, and rod and reel).

3. Characterize and compare the annual ASL composition of Chinook salmon in the lower Kuskokwim River subsistence harvest by temporal strata (i.e., fish harvested for the early, middle and late portions of the run).

Methods

This study estimates the ASL composition of the subsistence harvest of Chinook salmon in the lower Kuskokwim River by recruiting subsistence fishers from Bethel and lower river villages to collect ASL data from their subsistence catches, and then applying the findings to the total subsistence Chinook harvest in the lower river. This study is a continuation of FIS 05-306. Lower Kuskokwim River is defined as the portion of the river from Eek Island at the mouth of the Kuskokwim River upstream to Tuluksak (rkm 192).

Partnerships/Capacity Building

ADF&G/CF and ONC will conduct this project in partnership. ADF&G/CF is responsible for data collection from communities outside the Bethel area, for data processing, and reporting. ONC is responsible for data collection from Bethel and fish camps within a few miles of Bethel. ONC has applied for an OSM Partners Biologist position under the 2008 Request for Proposals, and if funded, the ONC Partners Biologist will be involved with data processing and reporting.

Justification

This investigation plan is seeking contination funding for the collection and analysis of biological age-sex-lengh (ASL) samples from subsistence caught Chinook salmon harvested in the lower Kusokwim River. Technical questions regarding sampling procedures have been addressed by the investigators. The investigators have demostrated the ability of conducting this work in a timely and professional manner. Collection of biological samples from the Chinook salmon subsistence harvest have been identified as a high priority by the Kuskokwim Fisheries Resource Coalition (KFRC) and Kuskokwim Salmon Strategic Plan. Collection of samples from subsistence fisheries requires the support and cooperation of subsistence users; consideration of local social and cultural values must be respected when undertaking scientific sampling of subsistence foods. For this reason, ONC, the traditional tribal council for the Bethel area, plays a major role in social/cultural aspects of this project and the successful implementation and community support of this project.

Project Number:	08-303
Project Title:	George River Salmon Weir
Geographic Region:	Kuskokwim
Data Type:	Stock Status and Trends
Principal Investigator:	Doug Molyneaux, ADF&G Commercial Fisheries Division
Co-Investigator:	David Orabutt, Kuskokwim Native Association
	Daniel Costello, ADF&G Commercial Fisheries Division

Cost: **2008:** $158,982 **2009:** $167,394 **2010:** $145,864 **2011:** $138,163

Issue

George River salmon contribute to subsistence, commercial, and recreational fisheries within the Yukon Delta National Wildlife Refuge. Contributing to numerous initiatives that are inclusive of the entire Kuskokwim River drainage, the George River weir is one of several projects used to develop reliable estimates of abundance, run timing, stock structure, productivity, and carrying capacity of salmon stocks over a broad geographic scale in the Kuskokwim Region. The project provides fundamental escapement information necessary to facilitate in-season management decisions and to assess trends in salmon populations. This project incorporates substantial capacity building and outreach components. Natural resource development in nearby drainages is expected to intensify subsistence and recreational use of George River salmon populations, heightening the need for continued monitoring of George River salmon escapements.

Salmon escapements to the George River weir have been monitored successfully since 1996. Information from this project has become integrated into the annual management process, both by providing insights into escapement and stock specific run timing through the fishery. The escapement age, sex, and length information collected at George River provides part of the context needed to assess the impacts of subsistence harvest practices.

Objectives

1. Determine daily and annual escapements of Chinook, chum, sockeye, and coho salmon to the George River from 15 June to 20 September.
2. Estimate the age-sex-length (ASL) composition of total Chinook, chum, and coho salmon escapements to the George River from a minimum of three pulse samples, one collected from each third of the run, such that the simultaneous 95% confidence intervals of age composition in each pulse are no wider than 0.20 ($\alpha = 0.05$ and $d = 0.10$).
3. Serve as platforms to facilitate other fisheries research projects (e.g., tagging studies).

Methods

Investigators will install a resistance board weir on the lower George River. Passage chutes in the weir will allow fish to be specieated and counted as the pass upstream, and a live trap will be used to sample salmon for scales, sex and length information, and for tag recovery. ASL data is processed post-season under the *Kuskokwim Salmon ASL Assessment Project* (FIS 07-303). Investigators will also record daily water temperature, water level, and weather conditions. A local technician hired by KNA will operate

the project along with a lead crew member provided by ADF&G. The project will serve as a platform for several research initiatives proposed to AYK-SSI beginning in 2008, and for continuation of a high school internship program funding which is being sought though separate sources.

Partnerships/Capacity Building

ADF&G and KNA operate the George River weir jointly. Planning, operation and data analysis associated with the weir is done jointly by staff from KNA and ADF&G. KNA has a proven track record of effective involvement in weir operation. Past interactions between KNA, ADF&G/CF, and local communities has created a high level of public awareness about salmon management and stock status, and has fostered career interests in fisheries through the student internship program.

Justification

Although the cost of this project has increased significantly for the reasons provided by the investigators, the TRC recommends continued funding of this project. The George River weir provides important information to in-season subsistence fishery managers and continuation of the weir is important for monitoring escapement of Chinook, chum and coho salmon in the middle Kuskokwim River. Data from this project is used in-season to assess escapements and postseason for run reconstruction studies currently being developed for Chinook, chum and sockeye salmon stocks in the Kuskokwim River. Salmon produced in the George River provide a clear nexus to large subsistence salmon fisheries in the Yukon Delta NWR. The project is technically sound and the investigators have an excellent record for completing the proposed work and delivering quality work products in a timely manner. A high level of capacity building has been developed between ADF&G and KNA as co-investigators of this project. Public outreach, opportunities for high school and college internships, and a strong sense of community involvement and identification with this project have been accomplished and should continue.

Project Number:	08-304
Project Title:	Takotna River Salmon Weir
Geographic Region:	Kuskokwim
Data Type:	Stock Status and Trends
Principal Investigator:	Doug Molyneaux, ADF&G Commercial Fisheries Division
Co-Investigator:	Carole Absher, Takotna Tribal Council
	Daniel Costello, ADF&G Commercial Fisheries Division

Cost: **2008:** $82,967 **2009:** $79,923 **2010:** $92,867 **2011:** $118,410

Issue

Takotna River salmon contribute to subsistence, commercial, and recreational fisheries within the Yukon Delta National Wildlife Refuge, and the Takotna River weir contributes to numerous initiatives that are inclusive of the entire Kuskokwim River drainage. As the only ground-based escapement monitoring project in the upper Kuskokwim River drainage, the Takotna River weir is one of several projects used to develop reliable estimates of abundance, run timing, stock structure, productivity, and carrying capacity of salmon stocks over a broad geographic scale in the Kuskokwim Region. The project provides fundamental escapement information necessary to facilitate in-season management decisions and to assess trends in salmon populations. This project is essential as a platform for several other projects and for developing escapement goals.

Salmon escapements to Takotna River weir have been monitored successfully since 2000. Information from this project has become integrated into the annual management process, by providing escapement and stock specific run timing data.

Objectives

1. Determine daily and annual escapements of Chinook, chum, sockeye, and coho salmon to the Takotna River upstream of the village of Takotna from 24 June to 20 September.
2. Estimate the age-sex-length (ASL) composition of total Chinook, chum, and coho salmon escapements to the Takotna River from a minimum of three pulse samples, one collected from each third of the run, such that the simultaneous 95% confidence intervals of age composition in each pulse are no wider than 0.20 ($\alpha = 0.05$ and $d = 0.10$).
3. Serve as platforms to facilitate other fisheries research projects (e.g., tagging studies).
4. Mentor high school students through the TTC high school internship program.

Methods

Investigators will install a resistance board weir on the Takotna River. Passage chutes in the weir will allow fish to be specieated and counted as the pass upstream, and a live trap will be used to sample salmon for scales, sex and length information, and for tag recovery for proposed tagging projects. Investigators will also record daily water temperature, water level, and weather conditions. A local technician hired by TTC will operate the project along with a lead crew member provided by ADF&G. The project will also serve as a platform for an established high school mentorship program operated by TTC in which local students will assist in weir operations as part-time employees.

Partnerships/Capacity Building

Takotna River weir will be operated as a partnership between ADF&G/CF and TTC. ADF&G/CF will provide crew members and biologist support, and TTC will provide crew members and high school interns. TTC will assume primary responsibility for logistic support during the field season, and ADF&G/CF will assume primary responsibility for technical support and post-season data analysis and reporting. Focus areas of both partners differs, but each has equal standing. Decisions as to planning, operations, and data interpretation are derived through joint consultation. Past interactions between TTC, ADF&G/CF, and local communities has created a high level of public awareness about salmon management and stock status, and has fostered career interests in fisheries through the student internship program.

Justification

The Takotna River weir provides important information to in-season subsistence fishery managers and continuation of the weirs is important for monitoring escapement of Chinook, chum and coho salmon in the upper Kuskokwim River. The project is also used as a capture site for several mark/recapture studies currently ongoing in the Kuskokwim drainage. The project is technically sound and the investigators have demonstrated the capability to conduct the proposed work in a timely and professional manner. The capacity building elements of this project have been given recognition by educators and community leaders.

Project Number:	08-351
Project Title:	Tuluksak Subsistence Chinook Salmon ASL
Geographic Region:	Kuskokwim
Data Type:	Harvest Monitoring and Traditional Ecological Knowledge
Principal Investigator:	Ken Harper, USFWS Kenai Fish and Wildlife Field Office
Co-Investigator:	Steve Miller, USFWS Kenai Fish and Wildlife Field Office

Cost: **2008:** $89,663 **2009:** $96,482 **2010:** $34,444 **2011:** $0

Issue

The Tuluksak River Chinook salmon escapement typically has a low percentage of females, ranging between 14% and 37% and averaged 26% between 1991 and 2006. The lowest female percentages correspond with the highest total harvests of subsistence and commercial fisheries, that occurred in the early 1990s. Direct causal effects from the high utilization years have not been established. In 2006, female Chinook salmon comprised 28% of the escapement in the Tuluksak River, although this number was derived from one of the lowest Chinook salmon escapements documented in the history of the Tuluksak River weir. Heavier than normal harvest pressure on the Tuluksak River natal stock may have occurred. High fuel costs exceeding $5.00 per gallon may have shifted fishing pressure from an active drift gillnet fishery in the main Kuskokwim River to a passive set-net fishery along channels in the Kuskokwim River leading to and channels within the Tuluksak River. An intensive in-river fishery targeting a specific river's salmon population may negatively affect size, age and sex composition.

Adequate escapements to individual tributaries and main stem spawning areas are required to maintain genetic diversity and sustainable harvests. Stocks or species returning in low numbers, or early and late portions of runs may be incidentally over harvested by intensive fishing pressure on abundant stocks. Data on escapement is lacking for many individual stocks in the Kuskokwim River drainage. It is important to monitor the fish returning to the Tuluksak River for in-season management and to build a database to establish escapement goals. Information on the abundance, run timing and subsistence use of Chinook salmon in the Tuluksak River is needed to ensure its conservation.

Objectives

1. Estimate the age, sex, and length composition of the Chinook salmon subsistence harvest in each of three zones near the confluence of the Kuskokwim and Tuluksak rivers such that simultaneous 95% confidence intervals of 0.20.
2. Test the hypothesis that the age, sex, and length composition of the Chinook salmon harvested in the subsistence fishery does not differ among three zones near the confluence of the Kuskokwim and Tuluksak rivers.
3. Test the hypothesis that the age, sex, and length composition of Chinook salmon harvested in the subsistence fishery near the confluence of the Kuskokwim and Tuluksak rivers does not differ from that of the escapement that passes the Tuluksak River weir, with a probability of at least 0.65 to detect a difference of at least 0.10 between any two sex at age proportions.

Methods

Local residents will be hired through the Tuluksak village council to conduct sampling during the season. The subsistence fishing area around the confluence of the Tuluksak and Kuskokwim rivers will be divided

into three zones constructed to capture potential differences in fishing gear and location. The statistical criteria can be satisfied with a sample size of approximately 225 fish from each zone to account for incomplete age and sex information based on 10 sex at age categories (two sexes and ages 1.1, 1.2, 1.3, 1.4, and 1.5). Harvests occur throughout the period from late May to mid-July, though the majority of the harvest will likely be taken in early to mid-June. An attempt will be made to collect ASL data from each Chinook salmon in a catch being sampled to avoid potential bias caused by the selection of individual fish.

Chinook salmon sampled from the Tuluksak River escapement will be pooled into a single sample that will be treated as a simple random sample. A chi-square test of homogeneity will be used to test the hypothesis that the sex at age composition of the resultant harvest and weir samples do not differ. ANOVA will be used to test the hypothesis that mean length does not vary between the harvest and weir, by sex at age category.

Partnerships/Capacity Building

Capacity building will continue, as the USFWS mentors and trains 2 village technicians and high school students. We have developed a formal agreement that has been signed by both parties committing the Service to train village personnel. This will provide an educational basis for employees and the village government to further their understanding of the management of lower Kuskokwim River commercial and subsistence fisheries.

Justification

While not identified as a priority in the Request for Proposals, the issue that would be addressed by this project, a low proportion of females in the Tuluksak River Chinook salmon spawning escapement, is of great concern to fishery managers. This project would provide information that would indicate whether Chinook salmon subsistence fisheries near the Tuluksak River are harvesting a disproportionately high proportion of females. While the investigators successfully addressed the technical issues identified in the TRC proposal review, the following items in the investigation plan need to be addressed and modifications made where needed: 1) participating families should be using gillnet gear representative of that used by most other families in each zone; 2) the field season should be shortened to about 1.5 months to reduce project costs while still obtaining needed information; 3) to further reduce costs, consideration should be given to hiring only one weir technician, if the investigators are successful in hiring a local individual to coordinate and monitor sampling; and 4) consultations need to be held with Tuluksak Native Community to obtain their cooperation and input on the proposed project.

Project Number:	08-402
Project Title:	Togiak River Chinook Salmon Radio Telemetry
Geographic Region:	Southwest Alaska
Data Type:	Stock Status and Trends
Principal Investigator:	Cheryl Dion, USFWS Anchorage Fish and Wildlife Field Office
Co-Investigator:	Pat Walsh, USFWS Togiak National Wildlife Refuge
	Robbin LaVine, Bristol Bay Native Association

Cost: **2008:** $176,376 **2009:** $120,656 **2010:** $0 **2011:** $0

Issue

Chinook salmon *Oncorhynchus tshawytscha* are important for subsistence, sport, and commercial harvest in the Togiak River. The Alaska Department of Fish and Game (ADF&G) has established an escapement goal in the watershed of 10,000 Chinook salmon based on aerial surveys. Average estimated Chinook salmon spawning escapement from 1995 to 2004 was 13,134 fish, with an average harvest of 10,282 fish, representing a 44% exploitation rate. In 2005 9,500 Chinook salmon were harvested with escapement estimated at 10,188, representing a 48% exploitation rate (Westing et al. 2006). The Office of Subsistence Management, through its strategic planning process, has identified the need to obtain reliable escapement estimates for Chinook salmon in the Togiak River (OSM 2005). The Bristol Bay Regional Advisory Council has also identified the need for improved monitoring of salmon escapement in the Togiak River (OSM 2003). The USFWS will use mark-recapture methods to estimate the total abundance of Chinook salmon and to investigate the effectiveness of aerial surveys to monitor Chinook salmon escapement in the Togiak River watershed.

Objectives

1. Estimate the proportion of Chinook salmon migrating past a weir on Gechiak Creek;
2. Estimate the abundance of Chinook salmon escaping into the Togiak River watershed such that the estimate will have a 90% probability of being within 25% of the true abundance;
3. Estimate the weekly age and sex composition of spawning Chinook salmon in Gechiak Creek, such that simultaneous 90% confidence intervals have a maximum width of 0.20;
4. Estimate the mean length of Chinook salmon by sex and age;
5. Document Chinook salmon spawning locations in the Togiak River watershed; and
6. Evaluate the effectiveness of aerial spawning ground surveys for monitoring Chinook salmon abundance in the Togiak River watershed.

Methods

The USFWS will conduct a mark-recapture experiment to estimate the abundance of Chinook salmon in the Togiak River watershed. Fish will be captured and marked with radio transmitters in the lower 5 km in the mainstem of the Togiak River. The marking location is upriver from the majority of the harvest, so estimates of abundance will be related to the escapement. Capture effort will be controlled to deploy tags in proportion to abundance. Chinook salmon will also be tagged with colored spaghetti tags to test the feasibility of identifying the presence of spaghetti tagged fish at the Gechiak Creek weir using underwater

video. These tags will serve as a secondary mark to determine loss of radio tags. The recapture event will consist of a fixed receiver station co-located with a video equipped weir on Gechiak Creek. Additional receiver stations will be placed at strategic locations within the watershed. Multiple searches from a fixed-wing aircraft will be conducted to locate marked fish in other areas of the Togiak River watershed, verify accuracy of fixed telemetry stations, and to document Chinook salmon spawning activity and locations.

Partnerships/Capacity Building

The USFWS Anchorage Fish and Wildlife Field Office will be responsible for the day-to-day operations at the project sites and will provide biological expertise and training to conduct the study, a crew leader, a technician, and two volunteers. BBNA will work with the Village of Togiak to provide one local hire to work with the weir crew and one local hire to work with the gillnetting and tagging crew. Togiak NWR will conduct aerial surveys and provide logistical support.

Justification

Obtaining reliable estimates of spawning escapement over time, identifying critical factors, and describing timing and migration patterns for Togiak River Chinook salmon is a high priority information need identified in the 2008 Request for Proposals. Togiak River Chinook salmon provide an important fishery for subsistence, sport and commercial harvesters. Improved information on Chinook salmon spawning escapement will provide for better management and will help evaluate the effectiveness of aerial surveys. The investigators have been responsive to the TRC comments in developing the investigation plan and have included a substantial match of $112,000 in 2008 and $96,000 in 2009, providing greater than a 50% match as requested in the RFP.

Project Number:	08-405
Project Title:	Lake Clark Sockeye Salmon Escapement and Population Monitoring
Geographic Region:	Southwest Alaska
Data Type:	Stock Status and Trends
Principal Investigator:	Dan Young, National Park Service
Co-Investigator:	Carol Ann Woody, US: Science and Education
	Robbin LaVine, Bristol Bay Native Association

Cost: **2008:** $56,052 **2009:** $56,962 **2010:** $58,318 **2011:** $59,633

Issue

This project continues monitoring sockeye salmon escapement to the Lake Clark drainage in southwest Alaska. Escapement monitoring on the Newhalen River has been funded by OSM since 2000 to provide a reliable estimate of escapement to Lake Clark. Obtaining reliable estimates of spawning escapement over time is the number one priority identified in the Bristol Bay-Chignik Strategic Plan and was specifically identified in the 2008 request for proposals. This project will provide information on daily and annual Lake Clark escapement estimates, run timing, and salmon age, sex and length composition, which will aid in assessing whether escapement is adequate to meet subsistence needs and evaluating current stock status and trends. The Lake Clark drainage is located within the Federally managed Lake Clark National Park and Preserve.

Since 1996, sockeye salmon returns to the Kvichak River and Lake Clark watersheds have declined for unknown reasons. The Kvichak River escapement has been below the minimum escapement goal in five of the last seven years and the average escapement of sockeye salmon to Lake Clark during 2000–2006 has been about 68% lower than the documented escapements in 1980–1984. Concurrent with declines in escapement, subsistence harvest in the Kvichak River drainage has declined from an average of about 60,000 fish harvested annually to 38,000 fish harvested in 2004.

Objectives

1. Estimate sockeye salmon escapement to Lake Clark.
2. Determine age, sex and length composition of the Lake Clark escapement

Methods

Sockeye salmon will be counted and sampled as they ascend the Newhalen River. Standard ADF&G counting tower protocols will be used to enumerate fish. Age, sex and length data will be collected from sockeye salmon in collaboration with the subsistence communities of Newhalen/Iliamna and Nondalton. Locally hired technicians will assist with escapement monitoring and sampling the age composition of the subsistence catch.

Partnerships/Capacity Building

This project has an established history of partnerships and capacity building. The USGS and NPS have successfully administered FIS 01-095 *Population monitoring of sockeye salmon from Lake Clark and the Tazimina River*, FIS 00-042 *Population assessment of Lake Clark sockeye salmon*, and FIS 05-402 *Lake Clark sockeye salmon escapement and population monitoring* in collaboration with the Kijik Corporation,

Nondalton Tribal Council and Villagers, Iliamna/Newhalen Villagers, and the Universities of Alaska and Montana. Local youth have been trained as biotechnicians and future project leaders through an intern program initiated in 2000.

A partnership with Bristol Bay Native Association has been added to this project to formalize partnering between NPS and local Native organizations and to assist with hiring local residents.

Justification

Lake Clark sockeye salmon escapement monitoring has been identified as a high priority information need in the strategic plan for this area as well as by the Regional Advisory Council. This project will continue monitoring efforts previously funded through Monitoring Program since 2000. There continues to be strong community support for continuing this project, and past efforts by investigators have been highly successful in hiring, training, and mentoring local high school and college students. The investigators have included a substantial match of $45,420, providing an 81% match to requested funds. Finally, the investigators and their agencies are well qualified to conduct and administer this work.

Project Number:	08-501
Project Title:	Copper River Sockeye Salmon In-river Abundance
Geographic Region:	Southcentral Alaska
Data Type:	Stock Status and Trends
Principal Investigator:	Keith van den Broek, Native Village of Eyak
Co-Investigator:	Michael Link, Jason Smith, Guy Wade, LGL AK Research Assoc.

Cost: **2008:** $185,809 **2009:** $205,385 **2010:** $0 **2011:** $0

Issue

Copper River sockeye salmon sustain large and important subsistence fisheries under Federal jurisdiction; and subsistence, commercial and sport harvests are significant in comparison to abundance. Management of Copper River sockeye salmon is complex due to inter-annual variation in the size and timing of stocks, fisheries that target a mixture of stocks and difficulties in estimating abundance due to the physical characteristics of the drainage. Recently, returns of sockeye salmon to several tributaries of the upper Copper River basin (e.g., Gulkana Hatchery, Tanada Creek weir) have been lower than expected given the acoustic-based estimates of abundance obtained from the Miles Lake sonar site. To further confound certainty in the abundance estimates provided by the Miles Lake sonar, the Alaska Department of Fish and Game (ADF&G) is close to completion in upgrading their Bendix acoustic system with a newer and much different acoustic system (dual frequency identification sonar—DIDSON). The management system and management plans for Copper River sockeye salmon have been built around the old Bendix sonar counts. The degree of comparability of the old and new acoustic systems is uncertain and the efficacy of the original Bendix acoustic counter has never been independently validated with an alternative technique.

We propose to use an independent technique to validate estimates provided by the new acoustic system and to the extent it remains, the Bendix-based estimates at Miles Lake. The purpose of this project is to use mark-recapture methods to estimate the weekly abundance of sockeye salmon returning to the Copper River above Miles Lake and compare these estimates to those provided by the Miles Lake sonar. The information collected from this project can be used by fishery managers to better manage the subsistence fishery for individual stocks, which ultimately could lead to increased subsistence harvest opportunities.

Objectives

To estimate the annual in-river abundance of sockeye salmon returning to the Copper River in 2008 and 2009 such that the estimates are within 25% of the true values 95% of the time.

Methods

This project will use two-event mark-recapture methods to estimate the weekly abundance of sockeye salmon at Baird Canyon in 2008–09. For the first event, sockeye salmon will be externally tagged with T-Bar anchor tops containing passive integrated transponders (TBA-PIT) daily at three fishwheels operated in Baird Canyon (rkm 66) from mid May to late August. These fishwheels will be located upstream of the Miles Lake sonar site and downstream of any in-river fisheries and major spawning tributaries. The second event will consist of fish examined for tags at two fishwheels located near Canyon Creek (rkm 157), located 12 km downstream of Chitina, AK. The fishing sites at Baird Canyon and Canyon Creek have been used successfully by the project team for these purposes since 2002. Data at both camps will be

recorded electronically using FS2001 PIT scanners and PDA handheld computers. Data will be stored in a Microsoft Access database, and analyzed using Microsoft Excel and the computer program SPAS.

Partnerships/Capacity Building

This project gives NVE an opportunity for meaningful inclusion in the research and long-term management of Copper River sockeye salmon. NVE will oversee all aspects of the project and provide critical logistical, technical and field assistance, thereby acquiring the array of skills needed to carry out major fisheries assessment projects. NVE fishery technicians will acquire the necessary skills and experience required for this and other fisheries research jobs. This project will allow NVE to further develop the skills of its members via local training, hiring for key positions in future fisheries assessment projects, and recruiting and encouraging young people to get an education in fisheries and natural resource management. This project will also promote interaction between a major subsistence group (NVE) and fisheries management agencies (ADF&G Commercial Fisheries Division). Finally, the overall study design will engage tribal organizations from different regions of the Copper River drainage in discussions on the project and promote interactions amongst subsistence users.

NVE will continue to work with the Tribal Council, staff, consultants and government agencies to identify key personnel to help carry on a long-term program. NVE will also actively participate in the workshop held at the end of each field season to review the project and discuss future refinements. These consultations will culminate in the overall assessment of the project that will drive the development of a long-term program, if deemed necessary.

Justification

Assessment of in-river abundance of Copper River sockeye salmon was identified as a high priority information need in the 2008 Request for Proposals. Sockeye salmon sustain a large and important subsistence fishery in the Copper River. In 2006, a total of 18,000 fish were harvested by Federal subsistence fishers. Currently, in-river abundance is estimated using sonar at Miles Lake. Independent estimation of sockeye salmon abundance would provide important verification of sonar passage estimates and help resolve whether offshore distribution and species apportionment significantly bias sonar assessment of sockeye salmon.

Project Number:	08-502
Project Title:	Tustumena Lake Coho Salmon Radio Telemetry and Weirs
Geographic Region:	Southcentral Alaska
Data Type:	Stock Status and Trends
Principal Investigator:	Douglas Palmer, USFWS Kenai Fish and Wildlife Field Office
Co-Investigator:	Kenneth Gates, USFWS Kenai Fish and Wildlife Field Office

Cost: **2008:** $238,250 **2009:** $118,360 **2010:** $44,236 **2011:** $0

Issue

The Federal Subsistence Board granted Ninilchik residents customary and traditional use for all fish species on Federal waters within the Kasilof River watershed in January 2006. The Federal Subsistence Board has addressed several regulatory proposals for Kasilof River salmon and steelhead trout since 2006. We lack basic population size and distribution information on coho salmon. The development of new Federal subsistence fisheries has triggered a need for information on the abundance, run-timing and distribution of coho salmon in the Kasilof River watershed.

Objectives

1. Determine the abundance and run-timing of adult coho salmon entering Glacier, Indian, Nikolai, and Shantatalik creeks.
2. Detect the ultimate spawning destination upstream of Silver Salmon rapids (rkm 24), via the presence of at least two tagged fish, of a population comprising 10% or more of all the coho salmon passing the capture site during each temporal stratum with probability 0.8.
3. Test the hypothesis that the distributions of spawners among strata are equal.

Methods

Feasibility work for this proposal was funded in out-of-cycle proposals 07-506 *Coho salmon spawning assessment in Tustumena Lake tributaries* and 07-507 *Run timing, abundance, and distribution of coho salmon in the Kasilof River watershed.* This proposal will build on information collected during these initial investigations.

Fish weirs equipped with underwater video equipment will be used to determine the run-timing and abundance of adult coho salmon in four tributaries of Tustumena Lake; Glacier, Indian, Nikolai, and Shantatalik creeks. These four streams are currently considered the primary contributors to the upper Kasilof River coho salmon population based on aerial and ground surveys and conversations with area residents. We will also deploy up to 150 radio transmitters in adult coho salmon to identify other potential spawning areas in the upper Kasilof River watershed.

Partnerships/Capacity Building

This project has been discussed with the Kenai National Wildlife Refuge and Alaska Department of Fish and Game. Consultations are currently ongoing with the Department and will continue throughout the project. We also plan to advertise and hopefully recruit qualified seasonal fishery technicians from the community of Ninilchik to assist with field operations.

Justification

This project is of the highest strategic importance for Federal subsistence management in the Southcentral region, and directly addresses data needs for assessing possible changes to coho salmon harvest guidelines. Currently, the Federal Board has expanded subsistence fishing opportunities in the Kasilof River drainage. Information from this project would provide more accurate spawning abundance estimates than are currently available through ground and aerial surveys. Information from this project would increase the chances of correctly determining and meeting spawning escapement needs and making correct management decisions for this emerging subsistence fishery. If this project is funded, the Technical Review Committee will assess the need for long-term monitoring after two years of project results.

Project Number:	08-503
Project Title:	Kasilof River Steelhead Trout Radio Telemetry
Geographic Region:	Southcentral Alaska
Data Type:	Stock Status and Trends
Principal Investigator:	Kenneth Gates, USFWS Kenai Fish and Wildlife Field Office
Co-Investigator:	Douglas Palmer, USFWS Kenai Fish and Wildlife Field Office

Cost: **2008:** $78,860 **2009:** $62,938 **2010:** $22,395 **2011:** $0

Issue

The Federal Subsistence Board granted Ninilchik residents customary and traditional use for all fish species on Federal waters within the Kasilof River watershed in January 2006. The Federal Subsistence Board has addressed several regulatory proposals for Kasilof River salmon and steelhead trout since 2006. Adult steelhead trout which spawn or over-winter in the upper Kasliof River watershed can be harvested in Federal subsistence rod and reel fisheries. A better understanding of movement patterns and over-wintering and spawning locations is needed to ensure conservation of steelhead trout in the Kasilof River watershed.

Objectives

1. Describe the freshwater migratory patterns and over-wintering distribution of radio-tagged adult steelhead trout which enter the Kasilof River during the fall.
2. Identify spawning areas selected by radio-tagged steelhead trout.

Methods

Feasibility work for this proposal was funded in out-of-cycle proposal 07-509 *Spawning and seasonal distribution of steelhead trout in the Kasilof River watershed.* This proposal requests funding for one additional year of radio tagging and follow-up monitoring to build on information collected during the initial radio-tagging effort in 2007.

Radio telemetry will be used to uniquely identify and track individual steelhead trout in the Kasilof River watershed. A target goal of 80 radio transmitters will be surgically implanted in steelhead trout captured in the mainstem Kasilof River between September and freeze-up. A variety of gear types will be used to capture fish for radio-tagging, including nets and sport fishing gear. Freshwater migratory patterns and over-wintering and spawning locations of radio-tagged steelhead will be determined throughout the fall, winter, spring, and early summer using a combination of fixed data-logging receiver stations and mobile tracking.

Partnerships/Capacity Building

This project has been discussed with the Kenai National Wildlife Refuge and Alaska Department of Fish and Game. Consultations are currently ongoing with the Department and will continue throughout the project. We also plan to advertise and hopefully recruit qualified seasonal fishery technicians from the community of Ninilchik to assist with field operations.

Justification

Assessment of steelhead distribution in the Kasilof River is a priority information need specifically identified by the Federal Subsistence Board. Little is known about distribution of steelhead in the Kasilof River watershed. Currently, the known population of steelhead trout is a few hundred fish. The combination of this proposed project and Investigation Plan 08-502 on coho salmon will allow steelhead spawning and distribution to be evaluated at less cost than a stand alone project. Knowledge gained in this project would help guide the Board in making regulatory decisions and help Federal managers develop effective long term monitoring tools.

Project Number:	08-504
Project Title:	Crooked and Nikolai Creeks Steelhead Trout Weirs and Video
Geographic Region:	Southcentral Alaska
Data Type:	Stock Status and Trends
Principal Investigator:	Kenneth Gates, USFWS Kenai Fish and Wildlife Field Office
Co-Investigator:	Douglas Palmer, USFWS Kenai Fish and Wildlife Field Office

Cost: **2008:** $39,965 **2009:** $45,565 **2010:** $12,590 **2011:** $0

Issue

The Federal Subsistence Board granted Ninilchik residents customary and traditional use for all fish species on Federal waters within the Kasilof River watershed in January 2006. The Federal Subsistence Board has addressed several regulatory proposals for Kasilof River salmon and steelhead trout since 2006. Crooked and Nikolai creeks are the only two streams within the Kasilof River watershed known to support steelhead trout. Annual returns to each stream are typically a few hundred fish. Adult steelhead trout which spawn or over-winter in the upper Kasilof River watershed can be harvested in Federal subsistence rod and reel fisheries. Annual escapement monitoring in Crooked and Nikolai creeks will be necessary to ensure conservation of these small populations.

Objectives

1. Determine the abundance and run-timing of adult steelhead trout entering Crooked and Nikolai creeks.
2. Estimate the age, sex and length of adult steelhead trout entering Crooked and Nikolai creeks.
3. Determine if the steelhead trout spawning in Crooked and Nikolai creeks are genetically distinct from one another and, if so, estimate the level of genetic differentiation.

Methods

Weirs equipped with underwater video systems will be used to determine the run-timing and abundance of adult steelhead trout returning to Crooked and Nikolai creeks during 2008 and 2009. Each weir and video system will be installed by April 20 and will operate through May 31 each year. The weirs and video systems will be unmanned except during times of maintenance and sampling. Sampling will be conducted weekly at each weir to estimate age and length composition of the return. Sex composition of the return to each stream will be determined using video images. Fin tissue will be collected from a sample of 50 adult steelhead trout at each weir. Genetic samples will be forwarded to the Conservation Genetics Laboratory in Anchorage for processing and analysis.

Partnerships/Capacity Building

This project has been discussed with the Kenai National Wildlife Refuge and Alaska Department of Fish and Game. Consultations are currently ongoing with the Department and will continue throughout the project. We also plan to advertise and hopefully recruit qualified seasonal fishery technicians from the community of Ninilchik to assist with field operations.

Justification

At this time Nikolai Creek is one of only two tributaries in the Kasilof River watershed known to support steelhead. Continued assessment of abundance in Nikolai Creek is needed for responsible management of a subsistence steelhead fishery. Little is known about abundance and distribution of steelhead trout in the Kasilof River watershed. Information gained from the combination of this project and FIS Project 08-503 *Spawning and seasonal distribution of steelhead trout in the Kasilof River* will help evaluate the effectiveness of using Crooked and Nikolai creeks as long-term monitoring tools. The investigator will also monitor abundance of Crooked Creek steelhead trout. The Technical Review Committee will assess the need for long-term monitoring after two years of project results.

Project Number:	08-600
Project Title:	Karta River Sockeye Salmon Assessment
Geographic Region:	Southcentral Alaska
Data Type:	Stock Status and Trends
Principal Investigator:	Cathy Needham and Lisa Lang, Organized Village of Kasaan (OVKa)
Co-Investigator:	Jan Conitz and Scott Host, ADF&G Commercial Fisheries Division
	Susan Howell and Delilah Brigham, US Forest Service
	Glenn Chen, Bureau of Indian Affairs

Cost: **2008:** $104,218 **2009:** $116,217 **2010:** $0 **2011:** $0

Issue

This project will assess the sockeye population for the Karta River, the traditional and current subsistence use area for the Tribe. In reference to the 2008 Request for Proposals and the Strategic Plan for the Subsistence Fisheries Resource Monitoring Program, Southeast Region (2006), this proposal addresses the highest priority species (sockeye salmon) and information need (estimate the current escapement). In addition, the Karta Lake system is ranked sixth on the list of prioritized systems.

Objectives

1. Count the number of sockeye salmon into the Karta River using a weir.
2. Estimate the number of sockeye salmon into the Karta River using mark-recapture methods with a coefficient of variation less than 10%.
3. Estimate the age, length, and sex composition of returning sockeye salmon into the Karta River system, based on a sample size equivalent to 6% of the number returning, with an estimated coefficient of variation for the two major age classes of 10% or less.

Methods

A 200 foot channel-spanning aluminum bipod weir will be constructed across the Karta River. On one section of the weir, an entrance cone leading into an 8' x 8' trap will be constructed to capture fish migrating upstream to spawn. The weir will operate from early June through September of each year, and all fish crossing the weir will be identified and counted. Approximately 15% of the sockeye salmon that cross the weir will be marked with a fin clip. Towards the end of the field season, crews will fly into the known sockeye spawning grounds and attempt to recapture fish that were marked at the weir. Mark-recapture data will be sent to the Alaska Department of Fish and Game (ADF&G) for data analysis, to provide a secondary escapement estimate to compare back to the real number of fish counted across the weir. In addition, approximately 600 sockeye, distributed across the entire run for each year, will be sampled for age, sex and length data. Sampled fish will be measured and sexed on site. Scales will be removed and sent to ADF&G to be read to determine age.

Partnerships/Capacity Building

The Organized Village of Kasaan has been working with a team of cooperating agencies on Prince of Wales Island since the beginning of 2005 on fisheries projects with steelhead and sockeye. A strong

partnership between Federal, State and Tribal government has been established, with key players working together across projects.

This project will continue to rely on the strong partnerships built with local agencies, and will assist OVKa in continuing to build it's Fisheries program so that the Tribe can address subsistence issues important to it's Tribal members. In addition the project offers local hiring opportunities for field crews. Some crew have been trained under other projects and this project secures position over time, and offers the opportunity for new Tribal members to be trained and employed by the Tribe.

Justification

This is a proven weir project which will provide reliable estimates of the annual escapement and age composition of sockeye salmon into the Karta Lake system which is an important subsistence resource for the community of Kasaan. Project costs are reasonable and all project funds go directly to OVKa. There is some question regarding the current status of this stock — recent estimates of escapements and subsistence harvests are less than they were 20 years ago. This project must make better use of the foot survey counts and mark-recapture data collected by ADF&G from 1995 to 2003; doing so will yield annual estimates of escapement for 19 of the past 27 years. The Technical Review Committee requests a revised investigation plan to incorporate both a mark-recapture estimate of the abundance of sockeye salmon in McGilvery and Andersen Creeks and a basic assessment of the current status of the stock based on historical escapement and harvest estimates. A moderate increase in project costs and involvement by the ADF&G co-investigators are expected in the revised investigation plan.

Project Number: 08-607
Project Title: Unuk River Eulachon Assessment
Geographic Region: Southcentral Alaska
Data Type: Stock Status and Trends
Principal Investigator: Todd Tisler, US Forest Service

Cost: **2008:** $34,030 **2009:** $36,425 **2010:** $0 **2011:** $0

Issue

Eulachon production from the Unuk River area is important ecologically and to subsistence and personal use fishermen in Ketchikan and Metlakatla. The harvest of eulachon in the Unuk River takes place in waters under Federal jurisdiction. The Unuk eulachon run has declined in recent years and very few eulachon returned to spawn in 2004, 2005, 2006, and 2007. The fishery was closed in 2006 and 2007. Reliable assessments of the annual abundance of eulachon in the area are needed to understand the status of the stock and responsibly manage the Federal subsistence fishery. This was identified as a priority information need in the 2006 Southeast Alaska Strategic Plan and in the 2008 Request for Proposals.

Objectives

1. Describe the timing, distribution, and abundance of eulachon returning to the Unuk River area.
2. Estimate the age, sex, length and weight composition of eulachon spawning in the Hooligan River, Landing Slough, and lower Unuk mainstem areas so that the estimated coefficient of variation for the principal age class is less than 15%.
3. Assess the status and management options for Unuk eulachon.

Methods

Surveys will be done each spring to assess the timing, distribution, abundance, and age, sex, and size composition of eulachon in the Unuk River area. The goal of this project is to make consistent, observer-independent, qualitative and quantitative assessments of the abundance of eulachon in the Unuk River area. All the main locations where eulachon have been observed in the past will be surveyed so we can best monitor their annual distribution and abundance. Records will be kept on survey conditions, the abundance of live and dead eulachon, the abundance of eulachon eggs, and the number and activity of birds and mammals in the area. During the month of March, project personnel will do daily foot and boat surveys of the six main eulachon spawning locations in the lower Unuk River area—Hooligan River, Upper Landing Slough, Lower Landing Slough, Side Channel, Matney Slough, and Lower Unuk mainstem. Survey routes and data collection methods will be standardized for each location. Numbers of small and large schools will be counted when counting individual fish is impossible. In three principal spawning locations, Hooligan River, Side Channel, and Matney Slough, the abundance of live eulachon in will be measured as a percentage of the stream bottom covered with fish (or eggs) at each of the 6 to 11 numbered stations in each location. The Unuk estuary, upper Burroughs Bay, Klahini River, and Chickamin River will also be surveyed but less intensively. Photos will be used to document survey conditions and eulachon abundance. If Federal subsistence fishing is allowed, fishing activities will be closely monitored and the harvest will be sampled to estimate the number and pounds of the harvest and the age, sex, and size composition of the fish.

There is very little stock assessment and management information for Borroughs Bay and Chickamin River eulachon. However, the available information needs to be compiled and summarized along with the information collected by this project. The emphasis will be to develop the best time series of annual abundance estimates and look at relationships among harvests, escapements, and returns. Finally, we will compare this information with that for other eulachon runs along the coast to assess the status of Unuk eulachon and propose a management plan for restoring and maintaining this run and a subsistence fishery.

Partnerships/Capacity Building

The Forest Service has been working with the local eulachon fishers, the communities of Metlakatla, Ketchikan, and Saxman, and biologists with ADF&G, Forest Service, Canadian Department of Fisheries and Oceans, and others to better understand the use, status, and management of Unuk eulachon. This project promotes this information sharing. Project funds will employ local residents and benefit the local economy. The Forest Service will solicit bids from local property owners for the field housing.

Justification

This project addresses an issue specifically identified in the 2008 Request for Proposals. The project has high strategic value since eulachon returns to the Unuk River have been dismal in recent years, and there is a severe conservation issue. There is also a fundamental lack of knowledge regarding population dynamics of this stock. The investigation plan describes a very workable and repeatable methodology and will greatly improve the documentation over past surveys. The information will be used to evaluate the stock status to ensure appropriate harvest levels.

Project Number:	08-650
Project Title:	POW Island Steelhead Trout Subsistence Harvest Survey
Geographic Region:	Southcentral Alaska
Data Type:	Harvest Monitoring and Traditional Ecological Knowledge
Principal Investigator:	Cathy Needham, Organized Village of Kasaan
	Tony Christianson, Hydaburg Cooperative Association
Co-Investigator:	Pat Petrivelli, Bureau of Indian Affairs
	Jeff Reeves, US Forest Service

Cost: **2008:** $65,092 **2009:** $73,390 **2010:** $0 **2011:** $0

Issue

The disparity between steelhead harvests recorded in confidential surveys and steelhead harvests reported in the permitting process has been documented in a previous FIS study (Turek 2005). This project will collect and analyze data through a confidential harvest survey in all Prince of Wales Island communities and compare this information with the reported harvests to provide a direct measure of the level of disparity. Follow-up interviews with steelhead harvesters will elicit the rationale for their level of participation in the Federal subsistence fishing permitting process. The information collected by this research project addresses the validity and reliability of subsistence harvest data for Prince of Wales steelhead, an information need for Southeast Alaska.

Objectives

1. Accurately estimate the subsistence steelhead harvests on Prince of Wales Island by conducting household surveys in all the communities and compare these harvests with the harvests reported by Federal permit holders.
2. Describe the factors affecting participation in the permitting process.

Methods

This project will gather data on steelhead harvest levels through confidential household surveys in each community on Prince of Wales Island. These data will be summarized and compared with data reported through the permitting process. Interviews will be conducted with subsistence steelhead harvesters identified from the household harvest surveys about the level of their participation in the Federal permitting process. The reasons and constraints for their participation from the first year of the study will be used to construct an ethnographic decision model. This model will be field tested on the key interviews conducted during the second year of the study. Findings from the household harvest surveys and the key interviews will be analyzed and included in the final report which will be reviewed during a community meeting on Prince of Wales Island.

Partnerships/Capacity Building

The Hydaburg Cooperative Association and Organized Village of Kasaan will lead this project, in collaboration with the other two Tribes on Prince of Wales Island (Craig Community Association and Klawock Cooperative Association), the Bureau of Indian Affairs Subsistence Branch and the U.S. Forest Service staff in Craig responsible for implementing the subsistence steelhead permitting on Prince of

Wales Island. Preliminary discussions with all collaborators started in early in 2006, and phone calls and a teleconference have occurred more recently to formulate this proposal.

This project continues to develop upon relationships between the Prince of Wales Tribes and the Federal government, in working together to address subsistence priorities important to the communities. Through continued partnerships, HCA and OVKa can maintain their capacity building for the development of their fisheries programs.

Justification

This project is recommended for funding with modification. The project addresses a high priority issue for the Federal Subsistence Program, in an area with considerable Federal jurisdiction. Investigators have performed well on previous Monitoring Program projects. The collaborative nature of the project and the strong capacity building component greatly strengthen the proposal. However, some technical issues need to be addressed in a revised investigation plan before the project moves forward.

Project Number:	08-651
Project Title:	Maknahti Island Subsistence Herring Fishery Assessment
Geographic Region:	Southcentral Alaska
Data Type:	Harvest Monitoring and Traditional Ecological Knowledge
Principal Investigator:	Helen Dangel Lorrigan, Sitka Tribe of Alaska
Co-Investigator:	Thomas Thornton, Portland State University

Cost: **2008:** $27,162 **2009:** $42,023 **2010:** $0 **2011:** $0

Issue

In 2006, 610 acres of submerged lands around Maknahti Island were included in the Federal Subsistence Management area. The Federal Subsistence Board has deferred a proposal to close this area to all non-Federal subsistence users. To understand the importance of the customary and traditional herring egg fishery in the Maknahti Island waters, Sitka Tribe seeks to gather historical and contemporary subsistence fishing information related to efforts made and harvests received in this area.

Objectives

Document and describe the customary and traditional herring egg fishery in Maknahti Island Federal waters, including harvest, effort, and customary and traditional practices.

To achieve this objective, Sitka Tribe of Alaska will:

1. Gather and analyze contemporary information on the subsistence harvest and use of herring eggs in Maknahti Island Federal waters
2. Gather and analyze historical Information on subsistence harvest and use of herring eggs in Maknahti Island Federal waters.

Methods

1. Contemporary Data Collection: Companion herring egg harvest survey
STA proposes to develop a number of survey questions to supplement the Herring egg Harvest Survey in 2008 and 2009, focusing specifically on harvest and use of the Maknahti area. The existing survey instrument was developed in consultation with ADF&G. Under this project, additional questions will be asked to get at site specific locations of harvest, and effort directed at harvest in this area. The harvest survey is administered to about 150 households, based on the most recent census of subsistence harvesting households in the Sitka Sound subsistence herring fishery. The sample surveyed includes routine and high harvesting households. The additional questions will be asked of all survey participants, although responses will not be included for ADF&G analysis due to local concerns about the site specific information being used against subsistence users.

2. Historical Information Collection
Sitka Tribe of Alaska will work in coordination with Dr. Thomas Thornton, who is currently applying for a grant from North Pacific Research Board to document the historic herring egg spawning and massing areas in Southeast Alaska and how those areas relate to historic subsistence and non-subsistence herring uses in Southeast Alaska. This study will use archaeological, historical, and environmental records as well as ethnographic interviews with contemporary local experts involved with herring fisheries. A key

objective of Dr. Thornton's project is to understand changes in herring stocks, spawning and massing patterns, and uses over long time scales, as complement to more detailed recent records kept by ADF&G since 1980.

Partnerships/Capacity Building

Sitka Tribe of Alaska has been collaborating with ADF&G from 2002–2006 on an annual customary and traditional herring egg harvest survey. This project will build upon that collaboration. STA has been working with USFS Sitka District Ranger Office on herring issues for the past year, since the Maknahti Island Federal waters were identified. Because Sitka's subsistence herring egg harvest is the last of its kind through the State, STA works with Alaska Natives around the state who either harvest or receive eggs from the Sitka subsistence herring egg fishery.

Justification

This project is recommended for funding. The project addresses a high priority information need specifically identified by the Federal Subsistence Board at its January 2007 meeting. The project appears to be a good collaborative effort between Sitka Tribe of Alaska and Portland State University, with some consultation on the part of the USDA Forest Service. The study design has some minor technical issues that investigators need to address or clarify. The budget is reasonable, and includes a significant match ($61,416). The project includes a good capacity building effort, and the investigators are qualified to do the work.

2007

FISHERIES RESOURCE MONITORING PLAN



FEDERAL SUBSISTENCE MANAGEMENT

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INTRODUCTION

BACKGROUND

Since 1999, under the authority of Title VIII of ANILCA, the Federal government has assumed management responsibility for subsistence fisheries on Federal public lands in Alaska. Expanded subsistence fisheries management has imposed substantial new informational needs for the Federal system. Section 812 of ANILCA directs the Departments of Interior and Agriculture, cooperating with the State of Alaska and other Federal agencies, to research fish and wildlife and subsistence uses on Federal public lands. To increase the quantity and quality of information available for management of subsistence fisheries, the Fisheries Resource Monitoring Program (Monitoring Program) was created within the Office of Subsistence Management. The Monitoring Program was envisioned as a collaborative inter-agency, inter-disciplinary approach to enhance existing fisheries research, and effectively communicate information needed for subsistence fisheries management on Federal public lands.

Original guidance for the Monitoring Program was provided by the Federal Subsistence Board and outlined in the *Operational Strategy for Information Management*[1]. The Regional Advisory Councils (Councils) have identified important issues and information needs for their regions, with review and update on an annual basis. To ensure that the Monitoring Program addresses the highest priority information needs for Federal subsistence fisheries management, the Office of Subsistence Management began a strategic planning process in 2004 to build on the work done by the Councils. Facilitated workshops for the Southwest, Southcentral, and Southeast regions have been held over the last three years with representatives of Federal and State agencies, academia, Alaska Native and rural organizations, and Councils. Participants at each workshop identified fisheries units for their region; developed goals, objectives, and information needs for each fishery unit; and then prioritized fishery units, goals, objectives and information needs. Final workshop reports for the Southcentral region and Bristol Bay-Chignik area have been completed, and results were used to guide the 2007 Request for Proposals. The Kodiak-Aleutians report should be completed by November 2006, the first workshop for the Northern Alaska Region is tentatively scheduled for spring 2007, and plans for the remaining regions should be completed within three years.

> *The mission of the Monitoring Program is to identify and provide information needed to sustain subsistence fisheries on Federal public lands, for rural Alaskans, through a multidisciplinary, collaborative program.*

To implement the Monitoring Program, a collaborative approach is utilized where five Federal agencies (Fish and Wildlife Service, Bureau of Land Management, National Park Service, Bureau of Indian Affairs, and USDA Forest Service) work with the Alaska Department of Fish and Game, Regional Advisory Councils, Alaska Native organizations, and other organizations. An inter-agency Technical Review Committee provides scientific evaluation of proposals and investigation plans. Public review and recommendations for funding are provided through the Councils. An inter-agency Staff Committee reviews all recommendations, and reconciles differences between staff and public recommendations. The Federal Subsistence Board approves annual monitoring plans with the benefit of both a technical recommendation by the Technical Review Committee and public review by the Regional Advisory Councils.

[1] Krueger, C., Brelsford, T., Casipit, C., Harper, K., Hildebrand, I., Rost, P., Thompson, K., and Jones, L. 1999. *Federal Subsistence Fisheries Management: Operational Strategy for Information Management. Report to the Federal Subsistence Staff Committee by the Sub-Committee for the Development of a Blueprint for Interagency Functions, Roles, and Responsibilities. 122 p.*

The purpose of this section is to present the Technical Review Committee's funding recommendations for the 2007 Monitoring Plan.

PROJECT EVALUATION PROCESS

The Technical Review Committee evaluates proposals, and subsequently full investigation plans, and makes recommendations for funding. The committee is chaired by the Chief of the Office of Subsistence Management Fisheries Information Services Division, and is composed of representatives from each of the five Federal agencies and three representatives from the Alaska Department of Fish and Game. An additional anthropologist from the Minerals Management Service provides additional social science expertise on the Technical Review Committee and provides a balance of disciplines. Staff from Fisheries Information Services provides support for the committee.

Four factors are used to evaluate studies:

1. **Strategic Priority**
   Proposed projects should address the following and must meet the first criteria to be eligible for Federal subsistence funding.

   Federal Jurisdiction—Issue or information needs addressed in projects must have a direct association to a subsistence fishery within a Federal conservation unit as defined in legislation, regulation and plans.

   Conservation Mandate—Risk to the conservation of species and populations that support subsistence fisheries, and risk to conservation unit purposes as defined in legislation, regulation and plans.

   Allocation Priority—Risk of failure to provide a priority to subsistence uses, and risk that subsistence harvest needs will not be met.

   Data Gaps—Amount of information available to support subsistence management (higher priority given where a lack of information exists).

   Role of Resource—Contribution of a species to a subsistence harvest (e.g., number of villages affected, pounds of fish harvested, miles of river) and qualitative significance (e.g., cultural value, unique seasonal role).

   Local Concern—Level of user concerns over subsistence harvests (e.g., upstream vs. downstream allocation, effects of recreational use, changes in fish abundance and population characteristics).

2. **Technical-Scientific Merit**
   The project must meet accepted standards for design, information collection, compilation, analysis, and reporting. Projects should have clear study objectives, an appropriate sampling design, correct statistical analysis, a realistic schedule and budget, and appropriate products, including written reports. Projects must not duplicate work already being done.

3. **Investigator Ability and Resources**
   Investigators must have the ability and resources to successfully complete the proposed study. This will be evaluated using the following information for each investigator:

Ability

- Education and training
- Related work experience
- Publications, reports, and presentations
- Past or ongoing work on Monitoring Program studies

Resources

- Office and laboratory facilities
- Technical and logistic support
- Personnel and budget administration

4. **Partnership-Capacity Building**
   Partnerships and capacity building are priorities of the Monitoring Program. ANILCA mandates that the Federal government provide rural residents a meaningful role in the management of subsistence fisheries, and the Monitoring Program offers tremendous opportunities for partnerships and participation of local residents in monitoring and research. Investigators are requested to include a strategy for integrating local capacity development in their investigation plans. Investigators must complete appropriate consultations with local villages and communities in the area where the project is to be conducted. Letters of support from local organizations add to the strength of a proposal. Investigators and their organizations should demonstrate their ability to maintain effective local relationships and commitment to capacity building.

POLICY AND FUNDING GUIDELINES

Several policies have been developed to aid in implementing funding.

- Studies must be non-duplicative with existing projects.
- Most Monitoring Program funding is dedicated to non-Federal sources.
- Activities not eligible for funding under the Monitoring Program include: a) habitat protection, restoration, and enhancement; b) hatchery propagation, restoration, enhancement, and supplementation; c) contaminant assessment, evaluation, and monitoring; and d) projects where the primary objective is capacity building (e.g., science camps, technician training, intern programs). These activities would most appropriately be addressed by the land management agencies.
- Proposals may be funded for up to three years duration.

Finances and Guideline Model for Funding

The Monitoring Program was first implemented in 2000, with an initial investment of $5 million. Since 2001, a total of $6.25 million is annually allocated for the Monitoring Program. The Department of Interior, through the U.S. Fish and Wildlife Service, annually provides $4.25 million. The Department of Agriculture, through the U.S. Forest Service, annually provides $2 million. On an annual basis, this budget funds both continuations of existing studies (year-2 or 3 of multi-year projects), and new study starts. Budget guidelines are established by geographic region and data type, and for 2007, $3.97 million is available for new starts. Proposals are solicited according to the following two data types.

1. **Stock Status and Trends Studies (SST).**
   These projects address abundance, composition, timing, behavior, or status of fish populations that sustain subsistence fisheries with nexus to Federal public lands. The budget guideline for this category is two-thirds of available funding.

2. **Harvest Monitoring and Traditional Ecological Knowledge (HM-TEK).**
These projects address assessment of subsistence fisheries including quantification of harvest and effort, and description and assessment of fishing and use patterns. The budget guideline for this category is one-third of available funding.

2007 FISHERIES RESOURCE MONITORING PLAN DEVELOPMENT

A Request for Proposals was issued in November 2005 that identified the following information needs:

- Escapement assessment of sockeye salmon stocks in southeast Alaska that support subsistence fisheries, particularly in the Chatham Straits area.
- Local knowledge of sockeye salmon stream locations, abundance and changes over time in southeast Alaska.
- Research to improve/ verify estimates of inriver return for Copper River Chinook and sockeye salmon.
- Escapement assessment of sockeye salmon stocks that support subsistence fisheries in the Kodiak and Alaska Peninsula area, particularly Afognak Lake, Buskin River, and McLees Lake.
- Document subsistence harvest patterns in southwest Alaska.
- Assessment of Lake Clark sockeye salmon (Kvichak River drainage).
- Evaluate patterns and trends in subsistence fish harvests in the Kuskokwim and Yukon rivers.
- Develop and maintain reliable estimates of mainstem abundance and tributary escapements for Chinook and chum salmon in the Kuskokwim and Yukon rivers.
- Develop basic biological monitoring information (distribution, abundance and stock structure) to detect and track changes in the status of fish stocks utilized for subsistence in the northern region
- Evaluate patterns and trends in subsistence fish harvests in Norton and Kotzebue Sounds

Sixty-eight proposals ($7.1 million) were received in February 2006. These proposals were reviewed by Fisheries Information Services Division staff and then the Technical Review Committee. In March 2006, the Technical Review Committee recommended 44 proposals ($4.8 million) for investigation plan development. In May 2006, 38 investigation plans ($4.1 million) were submitted for funding consideration. The Technical Review Committee recommended funding 35 projects ($3.8 million). The Regional Advisory Councils supported the committee's recommendations for all but one investigation plan, *07-455 Adak Island Subsistence Fishing*.

The Federal Subsistence Board reviewed the draft 2007 Fisheries Resource Monitoring Plan in January 2007 and selected 34 projects for inclusion in the plan. The plan provides 35% of the funding to Alaska Native organizations, 28% to Federal agencies, and 33% to State agencies (Figure 1).

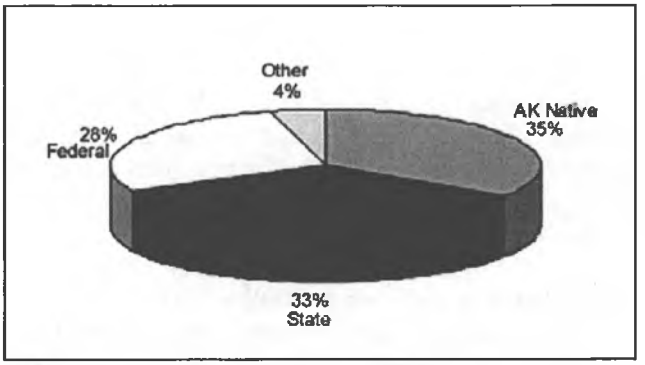


Figure 1. Distribution of 2007 funding to Alaska Native, Federal, State, and other organizations.

Tables summarizing the 2007 Fisheries Resource Monitoring Plan are provided on pages 8–11. Descriptions of the projects included in the plan can be found on pages 12–87.

Table 1. Number of projects funded for the 2007 Fisheries Resource Monitoring Plan. Project type includes stock status and trends (SST) and harvest monitoring and traditional ecological knowledge (HM-TEK).

Geographic Region	SST	HM-TEK	Total
Northern Alaska	2	1	3
Yukon	5	2	7
Kuskokwim	6	0	6
Southwest Alaska	5	1	6
Southcentral Alaska	4	0	4
Southeast Alaska	7	1	8
Total	29	5	34

Table 2. Cost of projects funded for the 2007 Fisheries Resource Monitoring Plan. Project type includes stock status and trends (SST) and harvest monitoring and traditional ecological knowledge (HM-TEK).

	Cost ($000)		
Geographic Region	SST	HM-TEK	Total
Northern Alaska	$152	$136	$288
Yukon	$522	$164	$686
Kuskokwim	$724	$0	$724
Southwest Alaska	$334	$146	$480
Southcentral Alaska	$514	$0	$514
Southeast Alaska	$749	$95	$844
Total	$2,995	$542	$3,537

Table 3. Northern Alaska region stock status and trends projects funded in 2007.

Study #	Title	Approved Budget ($000) 2007	2008	2009
07-105	North Slope Dolly Varden Genetic Baseline Completion	$33.0	$28.3	$15.1
07-107	Hulahula River Enumeration of Dolly Varden	$119.0	$0.0	$0.0
	Total	$152.0	$28.3	$15.1

Table 4. Northern Alaska region harvest monitoring and traditional ecological knowledge projects funded in 2007.

Study #	Title	Approved Budget ($000) 2007	2008	2009
07-151	NW Alaska Subsistence Fish Harvest Patterns and Trends	$136.4	$129.3	$79.6
	Total	$136.4	$129.3	$79.6

Table 5. Yukon region stock status and trends funded in 2007.

Study #	Title	Approved Budget ($000) 2007	2008	2009
07-202	East Fork Andreafsky River Salmon Weir	$148.6	$148.3	$139.2
07-204	Lower Yukon River Salmon Drift Test Fishing	$58.7	$50.9	$50.9
07-206	Innoko River Inconnu Radio Telemetry	$80.6	$73.2	$30.2
07-207	Gisasa River Salmon Weir	$123.0	$127.4	$135.1
07-208	Tozitna River Salmon Weir	$111.3	$111.3	$111.3
	Total	$522.2	$511.1	$466.7

Table 6. Yukon region harvest monitoring and traditional ecological knowledge projects funded in 2007.

Study #	Title	Approved Budget ($000) 2007	2008	2009
07-252	Yukon Flats Fishing Practices	$89.7	$76.4	$86.0
07-253	Yukon River Salmon Harvest Patterns	$74.4	$204.4	$46.1
	Total	$164.1	$280.8	$132.1

Table 7. Kuskokwim region stock status projects funded in 2007.

Study #	Title	Approved Budget ($000) 2007	2008	2009
07-302	Kuskokwim River Chum Salmon Run Reconstruction	$49.0	$56.4	$0.0
07-303	Kuskokwim River Salmon Age-Sex-Length Assessment	$81.4	$96.0	$99.5
07-304	Tatlawiksuk River Salmon Weir	$154.7	$161.8	$176.1
07-305	Kanektok-Goodnews River Salmon & Dolly Varden Weirs	$108.9	$101.0	$104.6
07-306	Kwethluk River Salmon Weir	$176.2	$187.9	$190.4
07-307	Tuluksak River Salmon Weir	$154.1	$159.6	$173.6
	Total	$724.3	$762.7	$744.2

Table 8. Southwest Alaska region stock status and trends projects funded in 2007.

Study #	Title	Approved Budget ($000) 2007	2008	2009
07-401	Afognak Lake Sockeye Salmon Smolt Assessment	$76.7	$76.7	$81.0
07-402	Buskin River Sockeye Salmon Weir	$99.2	$78.1	$79.2
07-404	Perryville-Clark River Coho-Sockeye Aerial Counts	$0.0	$31.0	$31.0
07-405	McLees Lake Sockeye Salmon Weir	$80.0	$75.9	$78.0
07-408	Togiak River Rainbow Smelt Assessment	$78.1	$78.4	$31.8
	Total	$334.0	$340.1	$301.0

Table 9. Southwest Alaska region harvest monitoring and traditional ecological knowledge projects funded in 2007.

Study #	Title	Approved Budget ($000) 2007	2008	2009
07-452	Kvichak Watershed Subsistence Fishing Ethnography	$146.1	$111.8	$42.3
	Total	$146.1	$111.8	$42.3

Table 10. Southcentral Alaska region stock status and trends projects funded in 2007.

Study #	Title	Approved Budget ($000) 2007	2008	2009
07-501	Tanada and Copper Lakes Burbot Abundance	$41.0	$37.0	$37.0
07-502	Tanada Creek Salmon Weir	$81.0	$81.9	$83.9
07-503	Copper River Chinook & Sockeye Salmon Abundance	$372.5	$366.7	$373.1
07-505	Long Lake Salmon Weir	$19.3	$19.7	$20.1
	Total	$513.8	$505.3	$514.1

Table 11. Southeast Alaska region stock status and trends projects funded in 2007.

Study #	Title	Approved Budget ($000) 2007	2008	2009
07-601	Hatchery Creek Sockeye Salmon Assessment	$117.8	$123.2	$122.9
07-604	Klag Lake Sockeye Salmon Assessment	$108.4	$109.1	$109.8
07-606	Hetta Lake Sockeye Salmon Assessment	$161.0	$161.8	$154.0
07-607	Kanalku Lake Sockeye Salmon Assessment	$172.8	$161.7	$165.4
07-608	Klawock Lake Sockeye Salmon Assessment	$73.2	$75.1	$76.3
07-609	Falls Lake Sockeye Salmon Assessment	$87.7	$90.3	$92.6
07-610	Behm Canal Eulachon Genetics	$27.9	$28.1	$0.0
	Total	$748.8	$749.3	$721.0

Table 12. Southeast Alaska region harvest monitoring and traditional ecological knowledge projects funded in 2007.

Study #	Title	Approved Budget ($000) 2007	2008	2009
07-651	Hydaburg Sockeye Salmon Customary & Traditional Systems	$94.9	$38.7	$0.0
	Total	$94.9	$38.7	$0.0

Project Number: 07-105

Project Title: Completion of a Genetic Baseline for Mixed-stock Analysis of Dolly Varden in the North Slope

Geographic Region: Northern

Data Type: Stock Status and Trends

Principal Investigator: Penny Crane, USFWS Conservation Genetics Laboratory

Co-Investigator(s): John Wenburg, USFWS Conservation Genetics Laboratory
Jim Reist, Canada Department of Fisheries and Oceans

Cost: 2007: $32,988 **2008:** $28,349 **2009:** $15,096

ISSUE

The North Slope Council has identified char fisheries as among the most important subsistence fisheries for this region. This proposal addresses the following priority information need for char, "Basic biological monitoring information (distribution, abundance and stock structure) to detect and track changes in the status of fish stocks utilized for subsistence."

Dolly Varden are harvested in coastal fisheries in the summer, and in inland fisheries in the winter. The largest harvests occur near Kaktovik, located in the Arctic National Wildlife Refuge (ANWR) near the U.S./Canada border. Marine fisheries harvest anadromous fish on their summer feeding migrations; harvests comprise fish from numerous spawning stocks, including fish from Canada. Inland fisheries harvest fish overwintering in rivers. The origin of fish in overwintering areas and the extent of mixing is largely unknown. We propose completing a genetic baseline initiated in FIS 01-113, "Eastern North Slope Dolly Varden genetic stock identification and stock assessment." Baseline data were collected from the Anaktuvuk River, Sagavanirktok River (Echooka, Ribdon, Saviukviayak, and Ivishak rivers), Canning River (Marsh and Main forks), Kavik River, Hulahula River, and Kongakut River. Simulation studies indicated that the stock contribution of individual rivers could be estimated reliably. However, adequate samples from rivers in ANWR and Canada are lacking. Inclusion of samples from rivers supporting the largest spawning aggregates in ANWR and anadromous populations in Canada would finalize an extensive baseline suitable for a multitude of mixed-stock analysis projects in coastal fisheries and in overwintering areas in Arctic Alaska and Canada. This baseline would facilitate subsistence fishery management: mixed-stock analysis using the baseline could be used to estimate the stock contributions to subsistence catches in Kaktovik to monitor trends in stock abundance which may be affected by changes in subsistence or sport fish harvests, increased industrialization in the North Slope, and climate change affecting species composition and hydrology in North Slope streams. Studies estimating the stock composition of fish in overwintering areas will aid the interpretation of aerial survey and sonar counts and evaluate the impacts of winter harvests.

OBJECTIVES

1. Collect tissue samples from Dolly Varden from two rivers in ANWR and one stream in Canada. Obtain tissue samples from DFO-Canada for archive Dolly Varden collections made in the five rivers in Canada that support anadromous Dolly Varden populations.

2. Assay samples (N=approximately 800 fish) for genetic variation at seven microsatellite loci to complete a genetic/tissue database for North Slope Dolly Varden for future mixed-stock analysis studies.

METHODS

Fin clips will be collected from approximately 200 Dolly Varden adults in spawning condition or juveniles from two rivers in the ANWR (likely the Aichilik and Egaksrak rivers) and one in Canada. Sampling of juveniles will be conducted to minimize the possibility of sampling error (see Waples 1998) by sampling a variety of size classes at multiple locations in a drainage. Sampling in Alaska will be coordinated through FIS 06-108 to minimize costs and impact in the ANWR. DFO-Canada will provide tissue from archived collections from five rivers in Canada known to support spawning aggregates of anadromous Dolly Varden: Firth, Babbage, Big Fish, Rat, and Vittrekwa rivers. Samples will be genotyped for at least seven microsatellite loci. Conformation of genotypic frequencies to Hardy-Weinberg expectation will be conducted on each putative population sample to verify that samples do not comprise more than one population; data will be evaluated for temporal stability of allele frequencies; and juvenile collections will be evaluated to determine at which size class family groups disperse. Data will be tested using analysis of artificial mixtures to define stock groups of Dolly Varden that can be estimated in mixtures.

PARTNERSHIPS/CAPACITY BUILDING

A poster summarizing results will be prepared for the ANWR, the village of Kaktovik, and appropriate communities in Canada. This project will foster partnerships between USFWS and DFO-Canada and will provide the basis to foster new partnerships between these agencies and North Slope villages for future mixed-stock fishery projects.

JUSTIFICATION

Funding this work will allow these investigators to complete and evaluate a comprehensive genetic baseline for Dolly Varden within the North Slope area. If genetic differences are great enough, the model developed can be used to obtain information on stock composition of harvests and wintering aggregations. This type of information will help managers ensure that this important resource and the fisheries that depend upon it are sustained.

Project Number: 07-107

Project Title: Enumeration of Dolly Varden Using Dual Frequency Identification Sonar in the Hulahula River, Alaska

Geographic Region: Northern

Data Type: Stock Status and Trends

Principal Investigator: Bruce Osborne, USFWS Fairbanks Fish and Wildlife Field Office

Co-Investigator(s): Jeff Melegari, USFWS Fairbanks Fish and Wildlife Field Office

Cost: 2007: $119,023 **2008:** $0 **2009:** $0

ISSUE

Dolly Varden from the nearshore coastal waters of the Beaufort Sea are one of the most extensively used and favored fish species in the subsistence harvest of coastal villages (Jacobson and Wentworth 1982; Craig 1989). They are primarily harvested in the nearshore narrow band of brackish water during the summer open-water season and during the late winter and early spring at overwintering locations in various rivers. Seven North Slope rivers, the Kongakut, Egaksak, Aichilik, Hulahula, Canning, Sagavanirktok, and Anaktuvuk, provide known spawning and overwintering habitat for separate stocks of Dolly Varden (Craig 1973; Krueger et al. 1999). Very little is known about the population sizes of these stocks or their contribution to subsistence fisheries. However, it is known that these stocks are an important subsistence resource for the communities of Kaktovik, Nuiqsut, and Anaktuvuk Pass (Jacobson and Wentworth 1982; Craig 1989; Pedersen 1990; Pedersen and Linn 2005).

Kaktovik is the center of federal subsistence fishing activity in the eastern North Slope. During April 2003, fishers indicated that throughout the winter 2002–2003 season, at Fish Hole Two on the Hulahula River, greater effort was being expended for harvesting fewer fish than in previous years (David Wiswar, U.S. Fish and Wildlife Service, personal communication). Some village residents have also described the last three years' harvests as having smaller sized fish. Continued concerns raised by residents of Kaktovik over reduced harvest of Dolly Varden in the Hulahula River make it logical to continue the DIDSON enumeration study for an additional year.

OBJECTIVES

The objectives of this study are to use DIDSON technology to:

1. Estimate annual abundance and describe variability in run size and timing of Dolly Varden in the Hulahula River;
2. Evaluate the presence of non-target species.

METHODS

The operational phase of the study will begin the third week of July and run through the third week of September 2007. Target validation of DIDSON images using underwater video, hook and line sampling and netting will continue during this third year. We will test the hypothesis that Dolly Varden are the only

fish present at the site during counting operations. To evaluate the presence of non-target species on the Hulahula River, an underwater camera synchronized with the sonar to view passing fish will be operated. The video monitoring in the Hulahula River will be used to identify what species are present, and verify DIDSON data. Video and DIDSON images will be compared and evaluated to identify swimming or other behavioral aspects that could influence counts or that may suggest potential methods of separating other species from Dolly Varden in the DIDSON images.

Additional sampling with a beach seine will be conducted to confirm timing and relative abundance of Dolly Varden and other species. The netting will be used to document species presence when water clarity prevents use of video monitoring and when the DIDSON data shows lots of fish. Species identification using DIDSON is difficult or impossible with fish of similar size and body shape. Arctic grayling are the only known species of a similar size and shape as Dolly Varden present in the Hulahula River when we are counting with the DIDSON. However, sampling efforts in previous years on the Hulahula River lead us to believe that they do not make up a large component of the fish population at any given time, and so do not compromise the Dolly Varden abundance estimate.

PARTNERSHIP/CAPACITY BUILDING

During fall 2006–winter 2007, the investigators will travel to the village of Kaktovik to discuss the nature and status of this project. Funding is requested for a local hire from the village of Kaktovik to utilize his/her knowledge of Dolly Varden and the area. Also, the possibility of placing a sonar intern on the project will be researched. Consultation with the Arctic National Wildlife Refuge will also continue.

JUSTIFICATION

Continuation of funding for an additional year will allow collection of one more year of sonar counts on the Hulahula River, and, more importantly, more rigorous examination of species apportionment assumptions. The investigators also need to determine whether a substantial proportion of the run enters this river after cessation of sonar operations, including the possibility of under-the-ice migration, by first obtaining information from Kaktovik residents to assess the need to extend the sonar operation season and sample under the ice. The investigators would need to modify the investigation plan, if additional information on this issue needs to be collected. If successful, this project would provide annual abundance estimates and describe annual variability in run size and timing of Dolly Varden in an important system within the Arctic National Wildlife Refuge. These techniques could then be adopted for other systems within the refuge to validate and supplement aerial survey counts that are now used to assess Dolly Varden.

Project Number:	07-151
Project Title:	Patterns and Trends in Subsistence Fish Harvests, Northwest Alaska 1994–2003
Geographic Region:	Northern
Data Type:	Harvest Monitoring/Traditional Ecological Knowledge
Principal Investigator:	James Magdanz, ADFG Division of Subsistence
Co-Investigator(s):	Hazel Apok, Maniilaq Association

Cost: **2007:** $136,425 **2008:** $129,314 **2009:** $79,627

ISSUE

This project will explore subsistence fishery harvest patterns and trends in six Northwest Alaska communities: Ambler, Kiana, Kobuk, Noatak, Noorvik, and Shungnak. In every one of the six study communities, estimated salmon harvests have declined since 1994. In some communities, declines in salmon harvests have been mitigated by increases in other fish harvests. But in other communities, this has not occurred. In each of the six communities, this project will explore community harvest trends and community patterns of use for salmon, Dolly Varden (trout), whitefish, and inconnu (sheefish). In an unusual feature of the study, researchers will invite a respondent in selected fishing households in two communities to participate in the analysis by reviewing their own households' ten-year harvest history and providing commentary and explanations for their own harvest patterns. In two communities, researchers also will work with high school science teachers and students to review existing data and collect new data in their communities. The main focus of the study is to identify variables that could improve the reliability of predictive harvest models so managers can better understand the factors associated with changing fish harvests. A specific focus will be on characterizing changes related to social, economic, and environmental factors—which cannot be influenced—from changes related to managerial factors—which can be influenced.

OBJECTIVES

1. Compare community and household harvest databases; identify and correct data errors.
2. Analyze community database to identify harvest trends for four fish species in six communities.
3. In two communities, work with high school students to review community harvest patterns, and with respondents in selected households to review household harvest patterns.
4. In six communities, collect household attributes (age of household head, changes in health status, deaths, marriages, etc.) from key respondents and through household interviews.
5. Summarize data from interviews and add household interview data to the harvest database.
6. Analyze the household-level database to identify associations between harvests and social, economic, and demographic variables.

METHODS

This project will rely extensively on two subsistence fishery harvest databases developed during previous projects. One is a community-level database, in which each record contains the fish harvests for one community in one year. The other is a household-level database, in which each record contains the fish harvests for one household in one year. The general study design calls for a coordinated analysis of the two datasets. The household harvest dataset will be enhanced with additional data on household attributes and from household interviews. To verify the household level database, researchers will calculate the sums of the annual reported harvests for each species in each community, and compare the results with the previously published annual summaries in the community-level database. If discrepancies are found, researchers will locate and correct the discrepancies. Researchers will visit each study community to verify household identifiers and gather additional data about household characteristics to supplement each household's harvest data. Data from these forms will be entered in a series of Microsoft Access databases, one for each study community. Researchers will use SPSS to merge the aggregated harvest database with the household characteristics data. Household identifiers will be corrected as necessary and duplicate records, if any, will be merged. The final expanded household-level database will be stored in SPSS. Researchers will use the SPSS to categorize households based on their harvesting histories, then test for correlations between reported harvests and household attributes. Researchers also will prepare a narrative summary discussing the explanations households offered for their own harvesting patterns. Researchers expect respondents will discuss changes in processing methods, changes in employment levels, increases in fuel and equipment costs, and changing environmental conditions as factors in their households' harvest levels.

PARTNERSHIPS/CAPACITY BUILDING

The project will work through the local IRA governments in each community, and contract with local research assistants in each study community to gather the data. When possible the project will employ the same local residents who gathered the fisheries data during the original salmon harvest survey projects. The project also will work with high school students and teachers in two communities. The ADFG Division of Subsistence and Maniilaq Association have cooperated on a number of research projects in Northwest Alaska dating back to the 1980s.

JUSTIFICATION

A majority of the Technical Review Committee (7 of 10 members) recommends funding this project. The goal of this project is to improve the reliability of a predictive harvest model for understanding changing subsistence harvest patterns, which is a high priority for the Monitoring Program. The investigation plan is scientifically and technically sound; the principal investigator is highly qualified to conduct the proposed work, and has an excellent record of performance with the Monitoring Program. Of concern, however, is the significantly increased cost and expanded timeframe compared with previous submissions for the same project. At the request of the Technical Review Committee, the principal investigator provided a budget justification for the $96,000 budget increase over the proposal, however, a minority of the committee (3 of 10 members) recommended that the project not be funded due to the high cost and lack of agency match. The minority of the Technical Review Committee recognized that while this project benefits the State and Federal subsistence programs, the State is seeking to have the Monitoring Program fund the entire effort. The minority of the Technical Review Committee felt that this project should only be done on a partnership basis with the State sharing costs.

Project Number: 07-202
Project Title: Abundance and Run Timing of Adult Salmon, East Fork Andreafsky River
Geographic Region: Yukon
Data Type: Stock Status and Trends
Principal Investigator: Raymond Hander, USFWS Fairbanks Fish and Wildlife Field Office
Co-Investigator(s): Francis Thompson, Algaaciq Tribal Council
David Waltemeyer, Association of Village Council Presidents
Ursula Hunt, Yupiit of Andreafski Tribal Council

Cost: **2007:** $148,623 **2008:** $148,293 **2009:** $139,221

ISSUE

The abundance and run timing of spawning populations of salmon within the Yukon River drainage have been identified as priority information needs by the Regional Advisory Councils, the Yukon River Comprehensive Management Plan for Alaska, and the Yukon River Joint Technical Committee Plan. The Andreafsky River system supports relatively large populations of Chinook, summer chum and coho salmon. The project's location in the lower river allows its escapement estimates to be used in-season by fishery managers. Data from the project are useful for post-season evaluation of management practices and provide insights for future run projections. The East Fork Andreafsky River weir has operated for the past twelve years and provides one of the longer term databases on escapement in the entire Yukon River, meeting the priority information need of the Office of Subsistence Management to "maintain reliable estimates of Chinook and chum salmon escapement over time." Andreafsky River salmon stocks comprise an important component of the diet of villagers along the Andreafsky River and the Yukon River below and including Pitka's Point. In addition, these stocks are harvested in commercial and subsistence fisheries below the confluence of the Andreafsky River from May through October. This investigation plan addresses enumeration of only Chinook and chum salmon.

OBJECTIVES

1. Determine daily escapement numbers and run timing of two species of adult salmon into the East Fork Andreafsky River.
2. Estimate the age, sex, and length composition of adult Chinook and chum salmon in the East Fork Andreafsky River.
3. Determine the numbers of resident fish species passing the weir.

METHODS

The location of the weir site is approximately 43 rkm upriver from the confluence of the Andreafsky and Yukon Rivers. A resistance board weir will be installed and operated on the Andreafsky River each year from 2007 to 2009. The abundance of salmon and resident fish species will be recorded to determine run timing and escapement size. A stratified random sampling design will be used to collect age, length, and sex ratio information for Chinook and summer chum salmon.

PARTNERSHIPS/CAPACITY BUILDING

The Fairbanks Fish and Wildlife Field Office will work with the Office of Subsistence Management Fisheries Information Services staff to strengthen the capacity building component of this project. Consultation will occur with Ursula Hunt, Andreafsky Tribal Council Leader, and Francis Thompson, Algaaciq Tribal Government, for hiring people from the local area, and David Wages, St. Mary's School Principal, for coordination with the Science Camp. David Waltemeyer, Association of Village Council Presidents will be working with weir personnel to become more familiar with weir operations. The Fairbanks Fish and Wildlife Field Office will continue the long running precedence of hiring local persons to staff and operate the Andreafsky River weir and provide outreach and educational opportunities for the benefit of the local communities. Discussions will continue regarding the Association of Village Council Presidents becoming a co-investigator on the project during this funding cycle.

JUSTIFICATION

This project addresses an issue specifically identified as a high priority need in the 2007 Request for Proposals, namely maintenance of reliable estimates of Chinook and chum salmon escapement over time. The Andreafsky River weir supports one of the most comprehensive data sets (12 consecutive years) for salmon escapement in the lower Yukon River. It currently operates from late June through July, providing escapement counts for Chinook and chum salmon. The U.S. section of the Joint Technical Committee ranked the East Fork Andreafsky River weir as third in importance for Chinook salmon, fourth for summer chum salmon, and second for coho salmon among existing escapement projects. Managers use the information provided by this weir as an indicator of run timing and strength in the lower Yukon River Geographic Unit for Chinook and summer chum salmon.

Project Number: 07-204
Project Title: Lower Yukon River Salmon Drift Test Fishing
Geographic Region: Yukon
Data Type: Stock Status and Trends
Principal Investigator: Fred Bue and Eric Newland, ADFG Division of Commercial Fisheries

Cost: 2007: $58,708 **2008:** $50,876 **2009:** $50,876

ISSUE

Fluctuations in production of Yukon River fall chum salmon make optimal harvest management of the mixed stocks especially difficult. Most commercial salmon harvest occurs near the mouth of the Yukon River in Districts 1 and 2, whereas the majority of the subsistence harvest occurs in the upper portion of the drainage. The subsistence fishery has priority use of these resources, but the fish pass through the major commercial harvesting area in the lower river before they arrive into the upper regions where most of the subsistence harvest occurs. Fishery managers are challenged to quickly and accurately assess run timing and abundance inseason to ensure that sufficient numbers of salmon pass through the downstream commercial fishing districts in order to provide for subsistence needs and adequate escapements to Alaskan and Canadian streams.

This proposal is an extension of the FIS 04-229 cooperative project. The U.S. section of the Joint Technical Committee ranked the lower Yukon River cooperative fall salmon drift test fishing project as one of the highest assessment projects for fall chum salmon based on it's performance and utility for providing information relevant for management decisions. Both State and Federal managers are in direct contact with this project inseason which enables a good understanding of the data and it's relevance to the fisheries as the salmon return.

OBJECTIVES

The objectives for the lower Yukon River fall salmon drift gillnet test fishery are to:

1. Estimate relative abundance of fall chum and coho salmon on a daily basis as they enter the mouth of the Yukon River.
2. Estimate run timing of fall chum and coho salmon as they enter the mouth of the Yukon River.
3. Estimate the age, sex, and length composition of the return of fall chum and coho salmon for use in brood year assessment and run forecasting.
4. Build partnerships and capacity by involving local technicians and communities in the project operation and information sharing.

METHODS

Project operation and data collection will be conducted in a manner similar to the project's operations over the past five fall seasons. Two test fish crews will be assigned one each to the Big Eddy and Middle Mouth locations. Drift test fishing will be conducted twice daily at each location using standardized methods and gear for consistency to allow time-series comparisons with previous years. Fishing times

and catch by species are recorded and catch per unit effort data is calculated for each drift. Age-sex-length sample data will be collected from a portion of the catch lost due to netting mortality with all mortalities distributed locally.

Test fishing results will be recorded twice daily on Excel spreadsheets at the ADFG Emmonak field office, consolidated and distributed daily to ADFG and USFWS offices. Daily results are made available to the public via an ADFG recorded telephone message. ADFG also provides test fish information to the public in weekly update packets which include other current Yukon River fisheries information that are distributed by fax, email, and web-posting. The updates track the project in season and makes relative comparisons to previous years and subjective observations. Post season, test fish data will be incorporated in annual project reports and merged into a larger data base for access by other studies.

PARTNERSHIPS/CAPACITY BUILDING

Staff from the Division of Commercial Fisheries would work cooperatively with local staff from the Yukon Delta Fisheries Development Association to recruit and appoint local technicians into crew-member positions. Participants would collect data utilizing drift gill nets and use standardized techniques for taking biological samples. In addition, staff from ADFG would mentor local-hire staff to develop skills for advancement within the program. The project will be reviewed inseason by the Regional Advisory Council and communities throughout the Yukon River drainage during teleconferences sponsored by the Yukon River Drainage Fisheries Association. The project has been used in the past as a platform to collect biological samples for other studies which will be considered an important function in the future as time permits and opportunities are presented. The annual start up of the fall drift project would be an extension of the summer chum salmon drift test fish project that has cooperative funding from ADFG and the Community Development Quota Program. The Yukon River Drainage Fisheries Association plans to continue their capacity building commitments by providing additional local technicians to assist in this project as well as overlap with other harvest monitoring projects operating in the same location.

JUSTIFICATION

Although the production of Yukon River fall chum salmon has improved since 2003, the Alaska Board of Fisheries has designated Yukon River fall chum salmon as stocks of yield concern. In 2001, the amounts necessary for subsistence (ANS) for Yukon River salmon species was revised. For fall chum salmon the range, based on historical harvests, was set to 89,500 to 167,100 fish annually. The subsistence harvest of fall chum salmon has fallen below the ANS range in five of the last six years. Based on the 1998–2002 averages, approximately 17% of the subsistence harvest and 97% of the commercial harvest of Yukon River fall chum salmon occurs in the lower Yukon River. This project provides one of the first reliable indications of run timing and strength for fall chum and coho salmon returning to the Yukon River. The U.S. Section of the Joint Technical Committee ranked the lower Yukon River cooperative salmon drift test fishing project as one of the highest priority assessment projects for fall chum salmon.

Project Number: 07-206

Project Title: A Radio Telemetry Investigation of the Spawning Origins of Innoko River Sheefish

Geographic Region: Yukon

Data Type: Stock Status and Trends

Principal Investigator: Randy Brown, USFWS Fairbanks Fish and Wildlife Field Office

Co-Investigator(s): John Burr, ADFG Division of Sport Fisheries
Caroline Brown, ADFG Division of Subsistence

Cost: **2007:** $80,593 **2008:** $73,159 **2009:** $30,240 **2010:** $30,976 **2011:** $43,187

ISSUE

Although not identified as a formal priority in the 2007 Monitoring Program, life history and stock distribution information regarding sheefish and other whitefish species utilized in the subsistence fisheries of the Yukon River drainage will be critical for future management of these stocks. Previous sheefish studies carried out in the Innoko River and elsewhere in the Yukon River drainage suggest that they use the Innoko River for feeding only and migrate elsewhere to spawn. Five spawning areas have been identified in the Yukon River drainage; two in the upper Koyukuk River, one in the upper reaches of the Yukon Flats, one in the upper Nowitna River, and one in the Chatanika River. At this point it appears that most or all sheefish in the drainage originate in one of these spawning areas. During their annual migrations between overwintering, feeding, and spawning areas, Innoko River sheefish would undoubtedly be subject to a wide variety of commercial, subsistence, and sport fisheries within the Innoko River and elsewhere in the Yukon River drainage. If Innoko River sheefish are members of Yukon River populations that spawn elsewhere, as suggested by previous studies, then effective management will be possible only by identifying the contributing stocks, the user groups throughout the range of each contributing stock, and the magnitude of the fishery harvests. In this study we propose to use radio telemetry techniques to test the hypothesis that Innoko River sheefish are members of Yukon River populations that spawn in locations other than the Innoko River drainage, and identify the spawning locations of those contributing stocks. Other biological data will be gathered as well, including spawning frequency, feeding habitat fidelity, and annual survival rates.

OBJECTIVES

1. Identify the spawning origins of sheefish radio-tagged in the Innoko River during summer by surveying known and suspected spawning areas in the drainage during spawning season.
2. Determine spawning frequency of radio-tagged sheefish by locating fish on spawning grounds over the course of four spawning seasons.
3. Investigate feeding habitat fidelity of radio-tagged sheefish by surveying major feeding habitats in the drainage during four summer feeding seasons.
4. Estimate annual survival of radio-tagged sheefish directly by assessing the status of each tagged fish over time.
5. Estimate the proportional contributions of identified spawning stocks to the aggregation of feeding sheefish in the Innoko River during 2007 and 2008.

6. Involve students and other Shageluk community members in the project directly during the tagging component of the project, and provide location data so the community can map the migrations of tagged fish through time.

METHODS

Radio telemetry techniques will be used in this study to identify the spawning origins of mature sheefish (≥72.5 cm fl) tagged in the Innoko River drainage during the summer feeding season. The transmitters will be surgically implanted in candidate fish. They will be programmed to operate for eight weeks during each of three seasons; spawning during September and October, overwintering during January and February, and feeding during May and June. They are expected to last for well over 4 years with this operating schedule. Aerial surveys will be conducted to locate tagged fish in known or possible spawning areas, feeding habitats, and overwintering locations. Spawning destinations will be identified based on the presence of radio-tagged fish in previously identified spawning areas, or in new areas of riverine habitats with gravel substrate during late September and early October. Spawning frequency will be evaluated based on the time intervals between spawning events, as determined by their presence in spawning areas during the fall. Feeding habitat fidelity will be investigated based on their presence in the same or different geographic areas during the summer feeding season from one year to the next. Annual survival will be estimated directly based on the fraction of tagged fish that are known to survive from one year to the next. Survival will be judged based on seasonal migrations. Stock contributions to the Innoko River feeding aggregation will be estimated based on the fraction of all sheefish located in spawning habitats that migrate to particular spawning areas. Some of the tagging will be conducted in the vicinity of Shageluk, and regular contact with the Shageluk School and sharing of location data will ensure community awareness and involvement in the project and its findings.

PARTNERSHIPS AND CAPACITY BUILDING

Caroline Brown has initiated an arrangement with Joy Hamilton, a teacher in the Shageluk School, to involve middle school students in an educational unit focused on this project. They will read about the project, join us in tagging fish in the Shageluk area, map migrations based on tag locations during the course of the year, share migration data with elders in the community, interview elders about their knowledge and how it relates to the telemetry findings, and write about the project. In this way, the students will take some ownership of the project and communicate the findings to the community.

JUSTIFICATION

Sheefish are an important subsistence resource throughout the Yukon River drainage. Currently, there is little information available on the life history of sheefish in the Yukon River. Sheefish are targeted in subsistence, commercial and sport fisheries, and caught incidentally in salmon fisheries. This project would build on the work initiated in 2005 on the lower Nowitna River. In 2007–2008, investigators propose to radio tag 50 sheefish annually from the Innoko River drainage and track them seasonally through 2011. This project will provide the opportunity to relocate each fish four times during spawning and feeding periods and three times during the overwintering period. The investigators have a strong capacity building component incorporating multiple disciplines and emphasizing outreach to local communities. The Technical Review Committee recommends funding this project for 3 years, with years 4–5 funding contingent upon committee review.

Project Number: 07-207

Project Title: Abundance and Run Timing of Chinook and Summer Chum Salmon in the Gisasa River, Koyukuk National Wildlife Refuge, Alaska

Geographic Region: Yukon

Data Type: Stock Status and Trends

Principal Investigator: Mark Voight, USFWS Fairbanks Fish and Wildlife Field Office

Cost: **2007:** $123,016 **2008:** $127,440 **2009:** $135,138

ISSUE

Assessment of management actions for Yukon River salmon fisheries is difficult due to the limited number of escapement studies in the drainage. Within the Koyukuk River drainage, a major tributary in the middle-lower Yukon River, the Gisasa River weir is one of two projects (Henshaw Creek weir) that provides inseason information to assess management actions as well as a postseason indexes of escapements of other tributaries within the Koyukuk River. Federal and State managers have consistently identified this project as an important source of information for fishery management. Also, the Yukon River Comprehensive Management Plan describes the need for escapement monitoring projects in the Koyukuk River region. Further, in November 2005 the Joint Technical Committee of the Yukon River Panel identified the Gisasa River weir as the second highest priority among lower river projects for Chinook salmon. The project was also identified as the third highest priority for summer chum salmon. The Gisasa River weir has operated for the past twelve years and provides one of the longer term databases on escapement in the entire Yukon River.

OBJECTIVES

This project is proposed as a three-year (2007–2009) study. The objectives are:

1. Enumerate the daily passage of Chinook and summer chum salmon.
2. Describe the age, sex, and length of Chinook and summer chum salmon.
3. Enumerate the daily passage of resident fish species.

METHODS

Investigators will install a resistance board weir across the Gisasa River, 4 km upstream from the mouth of the Gisasa River. The weir and passing chute will funnel fish into a live trap, which holds the fish so they can be counted (by species). Fish sampling will include measuring length, determining sex, and collecting scales.

PARTNERSHIP/CAPACITY BUILDING

Fairbanks Fish and Wildlife Field Office and the Refuge have strived for local involvement and capacity building with the project, and initial interest had been expressed by residents in the Galena area. However, the remoteness of the weir site reduces the attraction of the project, and subsequent interest has not

developed. Nevertheless, the Fairbanks Fish and Wildlife Field Office and the Refuge are committed to continually promoting capacity building by describing project opportunities at Regional Advisory Council, Yukon River Drainage Fisheries Association, and Refuge coordination meetings. In 2007, renewed efforts will focus on promoting the project and the potential for local involvement to tribal and village groups in the lower Koyukuk River area.

JUSTIFICATION

This project addresses an issue specifically identified as a high priority need in the 2007 Request for Proposals, namely maintenance of reliable estimates of Chinook and chum salmon escapement over time. The project is technically sound and the Gisasa River weir supports one of the most comprehensive data sets (12 consecutive years) for salmon escapement in the lower Yukon River Geographic Unit for Chinook and summer chum salmon. It currently operates from late June through the middle of August, and provides escapement counts for Chinook and chum salmon. The U. S. Section of the Joint Technical Committee ranked the Gisasa River weir as second importance for Chinook salmon and third for summer chum salmon among existing escapement projects. Managers use the information provided by this weir project as an indicator of run timing and strength.

Project Number: 07-208
Project Title: Abundance and Run Timing of Adult Salmon in the Tozitna River
Geographic Region: Yukon
Data Type: Stock Status and Trends
Principal Investigator: Bob Karlen, Carl Kretsinger, and Jason Post, Bureau of Land Management

Cost: **2007:** $111,349 **2008:** $111,349 **2009:** $111,349

ISSUE

There is a need to document the abundance and run timing of salmon spawning in the middle and upper portions of the Yukon River. This data gap has been identified by fishery managers and as part of the Yukon River Comprehensive Salmon Plan for Alaska. The current lack of information makes it difficult for Federal and State managers to adjust fishing schedules to assure that the many objectives of salmon management are met. Recent severe declines in Yukon River drainage salmon runs have resulted in additional concerns about conserving stocks and providing for subsistence uses. The region's Regional Advisory Councils have called for a range of studies to address the salmon declines, including new projects that assess the production of salmon from tributary streams and quantify their contribution to the overall productivity of the Yukon River drainage. The Tozitna River escapement project addresses these concerns.

OBJECTIVES

1. Count adult Chinook and summer chum salmon passing through the weir.
2. Describe run-timing characteristics of Chinook and summer chum salmon.
3. Estimate the proportion of Chinook and summer chum salmon spawning in the Tozitna River downstream of the weir and document the location of spawning habitat throughout the drainage using aerial survey techniques.
4. Estimate the age and sex composition of Chinook and summer chum salmon weekly.
5. Estimate the mean length of Chinook and summer chum salmon by sex and age.

METHODS

The Bureau of Land Management (BLM) proposes to count adult Chinook and summer chum salmon as they pass through a floating resistance-board weir located at river kilometer 79 on the Tozitna River. Counting and sampling for age, sex, and length information would begin with the arrival of the first salmon and continue until the daily salmon passage drops to <1% of the cumulative count for three consecutive days for both species.

PARTNERSHIPS/CAPACITY BUILDING

In 2005 (and again in 2006), the Yukon River Drainage Fisheries Association provided BLM with a research assistant who provided the project with over 30 years of local knowledge. In an ongoing effort to involve nearby communities in the project, BLM would like to continue hiring rural residents while using the Yukon River Drainage Fisheries Association as a source of technicians for the project. If the project is funded, BLM will put a portion of the money into an agreement with the Yukon River Drainage Fisheries Association to cover the annual cost of one technician for the project.

To further capacity development, BLM also presents the Tozitna River escapement data annually to the Resource Advisory Councils as a means of information sharing with subsistence users of the Yukon River. BLM has also promoted interaction with subsistence users through the Partners for Fisheries Monitoring Program. Kim Elkin (Tanana Chiefs Conference) and Dave Waltemyer (Association of Village Council Presidents) and their technicians from the Partners Program visited the Tozitna project in 2003 in an effort to gain exposure to project operations and data gathering methodologies. BLM encourages continued information sharing like this in the future.

JUSTIFICATION

This project addresses an issue specifically identified as a high priority need in the 2007 Request for Proposals. The project is technically sound and supports 5 consecutive years of salmon escapement in the middle Yukon River. The U.S. Section of the Joint Technical Committee ranked the project as sixth importance for both Chinook and summer chum salmon, making the Tozitna River weir the lowest ranked Chinook salmon monitoring project in the lower Yukon River Geographic Unit. Managers use the information provided by this weir as an indicator of run timing and strength for the lower Yukon River Geographic Unit for Chinook and summer chum salmon.

Project Number:	07-252
Project Title:	Non-Salmon Fishing Practices and Traditional Knowledge in the Northern Yukon Flats Region of Alaska
Geographic Region:	Yukon
Data Type:	Harvest Monitoring/Traditional Ecological Knowledge
Principal Investigator:	Mike Koskey, ADFG Division of Subsistence
Co-Investigator(s):	Hishinlai' "Kathy " Sikorski, UAF Alaska Native Language Center Ingrid McSweeny, Bureau of Land Management Wennona Brown, USFWS Yukon Flats National Wildlife Refuge Davey James, Gwichyaa Zhee Gwich'in Tribal Government

Cost: 2007: $89,691 **2008:** $76,433 **2009:** $85,957

ISSUE

Non-salmon fish are an important subsistence resource. There may be an inverse relationship between salmon and non-salmon harvests, but there is little in-depth information on the changes that have influenced non-salmon fishing practices in the Northern Yukon Flats region. The ADFG Community Subsistence Information System reports wide variation in the contribution of non-salmon fish to the regional subsistence harvest by both year and location. The greatest take of non-salmon fish reported for a single year (1987) was in Fort Yukon at 75,965 pounds (29,083 fish). The proposed project will provide information on the contemporary harvest and use of non-salmon fish by residents of four Yukon Flats communities: Chalkyitsik, Venetie, Arctic Village and Fort Yukon—and to place these data within a historical framework of changing fishing practices within the region

OBJECTIVES

This project is designed on a three-year time-frame with the following goals:

1. Document the traditional ecological knowledge of non-salmon fish species in the Yukon Flats communities of Fort Yukon, Chalkyitsik, Venetie, and Arctic Village.
2. Estimate the harvest levels and use patterns of non-salmon fish species by village residents through systematic household surveys.
3. Identify and document historic and contemporary non-salmon harvest areas through resource use and Gwich'in placename mapping.

METHODS

The project relies on semi-structured ethnographic interviews with elders and other knowledgeable fishers, mapping, placename analysis, archival research, and participant-observation in order to address the first objective. The second objective is addressed through the implementation of a household harvest survey in each community conducted by a local research assistant. The final objective is addressed through a review of previously collected Gwich'in placenames as well as resource use mapping to be conducted during ethnographic interviews and reviewed during community meetings

PARTNERSHIPS/CAPACITY BUILDING

One of the primary strengths of this project is the cooperation of five organizations representing two Federal agencies (BLM and USFWS), one State agency (ADFG), one academic institution (Alaska Native Language Center), and one Alaska Native government (Gwichyaa Zhee).

JUSTIFICATION

The Technical Review Committee recommends funding this project. This is a potentially important project that ties in with several other Monitoring Program funded projects to provide a comprehensive understanding of non salmon harvest and use along the Yukon River. The project addresses an issue specifically identified as a high priority in the 2007 Request for Proposals, namely evaluating patterns and trends in subsistence fish harvests for important non-salmon fish species, and will likely provide valuable information for Federal subsistence fisheries management. The project is technically sound, contains a solid capacity building project, and investigators are qualified to conduct the proposed work. Investigators responded to Technical Review Committee comments in full. The budget increased 33% over the proposal submitted in January 2006.

Project Number: 07-253
Project Title: Continuity and Change in Salmon Harvest Patterns, Yukon River Drainage, Alaska
Geographic Region: Yukon
Data Type: Harvest Monitoring/Traditional Ecological Knowledge
Principal Investigator: Robert J. Wolfe, Robert Wolfe and Associates
Co-Investigator(s): Cheryl Scott, Alaskan Connections

Cost: 2007: $74,431 **2008:** $204,370 **2009:** $46,116

ISSUES

The primary issues addressed are the factors contributing to changes in subsistence harvest patterns for salmon along the Yukon River since the 1990s, the period of recent collapse of summer chum, fall chum, and coho salmon runs and restrictions of local subsistence and commercial salmon fisheries. The study will describe and analyze continuity, change, and trends in harvest patterns of federally-qualified subsistence users during this time period. The analysis will clarify how local families have responded to the salmon downturn in terms of household participation rates, fishing areas, mobility, use of seasonal fishing camps, types of equipment (such as boats, motors, fishwheels, net mesh size, and net length), effort, labor force composition, commercial-subsistence fishing interactions, species selection, harvests of fish, furbearers, and other wildlife, customary management practices, and other factors. The research will explore relationships of subsistence salmon harvests with other sectors of the local socioeconomic system, including commercial salmon harvests, furbearer harvests, and other fish and wildlife harvests. This type of information fits with Priority Information Needs for the Yukon Region: "Evaluate patterns and trends in subsistence fish harvests; factors to include, but are not limited to, demographic, economic, regulatory, and cultural issues."

OBJECTIVES

The objective of this study is to document continuity, change, and trends in the subsistence salmon fisheries of the Yukon River drainage as families have responded to salmon declines during the 1990s. The research will describe and examine continuity and changes in factors such as the following: local participation in salmon fishing, fishing efficiency, equipment, areas, mobility, fishing camps, species composition, workers, dogs, dog food, trapping/hunting furbearers, customary management of furbearer areas, commercial-subsistence fishing relationships, and out-migration of family members. The objective of the analysis is to produce a report that assesses continuity and change in these factors.

METHODS

The primary methods are face-to-face interviews with knowledgeable, local subsistence experts, and systematic surveys of households in three villages in the lower, middle, and upper Yukon River drainage. Additional methods are the compilation and analysis of existing databases on fish harvests by area, and consultation with other experts familiar with the fisheries.

PARTNERSHIPS/CAPACITY BUILDING

This project will develop partnerships and build capacity in rural villages. Before collecting new information, the first year provides a period of consultation with rural villages, fishing organizations, and local experts. The principal investigator will train three local researchers at each village location in social science methodology, including training in survey construction, sample selection, survey administration, note taking, key respondent interviews, and data management techniques. The local researchers will be responsible for conducting household interviews, comprising a central part of the study. To the extent the local researchers are members of existing rural organizations, this training will build capacity in local entities as well as in individuals. The project will pay honorarium to persons interviewed as part of the project. This recognizes the significant contributions of their knowledge in documenting trends and patterns in subsistence fisheries.

JUSTIFICATION

The Technical Review Committee recommends funding this project. The project addresses an issue specifically identified as a high priority issue in the 2007 Request for Proposals, namely to evaluate patterns and trends in subsistence fish harvests, including demographic, economic, regulatory and cultural issues. Project investigators are uniquely qualified to conduct the proposed work, and have a proven track record in conducting complex analyses such as the one described in this investigation plan. Investigators were highly responsive to all the Technical Review Committee comments, and have provided a very thorough, well written, and technically sound project. While somewhat high, the budget is clearly justified in the investigation plan, and based on the extensive involvement of the principal investigators in all phases of the project, appears justified. Understanding changing harvest patterns is a critical element of Federal subsistence fisheries management, and this research will make a significant contribution towards this goal. Investigators are encouraged to include an assessment of the effects of windowed fishing schedules on subsistence fishing in their analysis.

Project Number: 07-302
Project Title: Kuskokwim River Chum Salmon Run Reconstruction
Geographic Region: Kuskokwim
Data Type: Stock Status and Trends
Principal Investigator: Brian Bue, Bue Consulting LLC
Co-Investigator(s): Douglas Molyneaux, ADFG Division of Commercial Fisheries
Cost: 2007: $49,015 **2008:** $56,398 **2009:** $0

ISSUE

The status of chum salmon populations within the Kuskokwim River drainage has been of concern in recent years due to apparently low run abundance. The Alaska Board of Fisheries identified Kuskokwim River chum salmon as a stock of concern in November 2000, and enacted regulations to reduce fishing opportunity in all fisheries so more chum salmon could escape to spawn. Reliable information on the numbers of salmon returning by year is essential if researchers are going to understand the mechanisms that drive variation of salmon abundance. This information is a prerequisite to investigating the effects of subsistence management actions, historical exploitation rates, long-term consequences of harvest practices, and the likelihood that projected abundance levels can sustain future harvests.

University of Alaska researchers began to approach the problem of reconstructing past returns by developing a statistical model which incorporated historical information (1976–1999) to estimate the magnitude of past chum salmon returns. The project showed promise but suffered because of insufficient information on salmon escapement. Numerous new projects to enumerate salmon escapement have been in place since the late 1990s and there is a strong chance that this new data will provide the needed resolution to allow the model to work properly. This project will build upon previous work by drawing in information from escapement and mark-recapture projects collected since 1999. Objectives of this project have been identified as high priority information needs by the Kuskokwim Fisheries Resource Coalition in the recent draft Gap Analysis for the Kuskokwim Area Salmon Research Plan.

OBJECTIVES

1. Estimate spawning and total abundance of chum salmon in the Kuskokwim River from 1976 through 2007 using a statistical model for combining multiple data sources.
2. Develop brood year tables for Kuskokwim chum salmon for the years 1976 through 2007 by combining the abundance estimates with estimates of age composition obtained from the subsistence and commercial fisheries as well as escapement enumeration projects.
3. Estimate the stock-recruitment relationship for the Kuskokwim River chum salmon population using the brood table developed in Objective 2 and the Ricker and Beverton-Holt stock-recruitment models.

METHODS

Total chum salmon abundance and escapement into the Kuskokwim River for return years 1976 through 2007 will be estimated using statistical models similar to those developed by University of Alaska

researchers for estimating historical chum salmon abundance in the Yukon and Kuskokwim Rivers. Our strategy will use all historic data related to abundance; including: subsistence catch numbers, catch numbers and rates from the inriver commercial fisheries, test fishery catch rates, weir counts, aerial surveys, sonar counts, and mark-recapture estimates. While no one of these abundance indices is likely to provide a reliable estimate of historical drainage wide abundance or escapement, when used in aggregate, they should provide a reasonably accurate estimate. We will combine these indices of abundance using multivariate statistical tools and a maximum likelihood estimation framework. The abundance and escapement estimates will be combined with all available data on salmon age composition to estimate brood tables for the Kuskokwim River chum salmon stock. Brood table information will then be used to estimate the stock-recruitment relationship for the drainage.

PARTNERSHIPS/CAPACITY BUILDING

Organizations that provide data processed by this project include Kuskokwim Native Association, Organized Village of Kwethluk, Orutsararmiut Native Council, Takotna Tribal Council, Tuluksak Traditional Council, ADFG Commercial Fisheries Division, and U.S. Fish and Wildlife Service (Kenai Fish and Wildlife Field Office; Yukon Delta and Togiak National Wildlife Refuges). In December 2005, this project was reviewed and supported by the Kuskokwim Fisheries Resources Coalition, a group that includes representatives from the ADFG Subsistence Division, ADFG Commercial Fisheries Division, the Association of Village Council Presidents, Kuskokwim Native Association, Orutsararmiut Native Council, Yukon Delta National Wildlife Refuge, USFWS Fisheries Information Services, and others.

JUSTIFICATION

The investigators propose analysis of existing data from 1976 through 2007 to estimate spawning and total abundance of chum salmon in the Kuskokwim River using a statistical model for combining multiple data sources; and to describe the spawner-recruit relationship of Kuskokwim River chum salmon assessing the influence of parental escapement abundance on variations in return. The proposed work would address an important research question and potentially could introduce innovative methodologies and management tools for Kuskokwim River chum salmon fisheries.

Project Number: 07-303
Project Title: Kuskokwim Salmon Age-Sex-Length Assessment
Geographic Region: Kuskokwim
Data Type: Stock Status and Trends
Principal Investigator: Douglas Molyneaux ADFG Division of Commercial Fisheries

Cost: 2007: $81,440 **2008:** $96,010 **2009:** $99,510

ISSUE

A number of projects have been funded through Fisheries Information Service to monitor salmon escapements and subsistence harvest, and most include collection of samples used to estimate salmon age, sex, and length (ASL) compositions. In 2005, ASL data were collected from 30,000 escapement samples, commercial and subsistence harvests, and the Bethel test fishery. This project provides the support required to process these ASL samples, compile the information, and provide consistent analysis of results to managers, project leaders and the public. The ASL information is used in a variety of ways including forecasting future run abundance, assessing effects of harvest methods, determining spawner-recruit relationships, studying causes of variation in freshwater and marine growth, and assessing many other short-term and long-term population trends.

OBJECTIVES

1. Estimate the age-sex-length (ASL) composition of Chinook, chum, and coho salmon samples collected from fisheries, escapements, and other Monitoring Program funded projects in the Kuskokwim Area.
2. Standardize ASL sampling throughout the Kuskokwim Area by providing sampling kits and instructions for measuring salmon length, sex determination, and collection of scales to all projects collecting ASL data in the Kuskokwim Area.
3. Standardize age determination of Kuskokwim Area salmon from scales by processing all collected scales at a central lab in Anchorage ADF&G with scale-ageing standardization across AYK.
4. Provide electronic and physical sample storage for project ASL data by loading ALS data into a central database and filing physical records (scales, acetates, data collection forms) in Anchorage (merging with data collected since 1961).
5. Provide access ASL data to researchers and public through responding to data requests for physical and electronic records of age and growth.

METHODS

Participants will deliver salmon ASL samples to the principal investigator. Samples will be from subsistence and commercial fisheries, as well as Kuskokwim River Region stock status and trends projects operated by various Federal, State and Tribal groups. Salmon scales will be manually processed and aged, and ASL data will be electronically processed with standard computer programs to provide summaries of harvest and escapements partitioned into age, sex, and length categories. A local hire fish

and wildlife technician will be employed through Work Place Alaska hiring procedures to assist with ASL processing during the summer months. Summary information will be provided to various contributing project leaders and to participating subsistence harvest samplers.

PARTNERSHIP/CAPACITY BUILDING

The *Kuskokwim Salmon Age-Sex-Length Assessment* project is integrated into several Monitoring Program funded projects. Some of the organizations that will directly benefit from the project include ADFG Commercial Fisheries Division, ADFG Sport Fish Division, ADFG Subsistence Division, Association of Village Council Presidents, Kuskokwim Native Association, Organized Village of Kwethluk, Orutsararmiut Native Council, Native Village of Kwinhagak, Takotna Tribal Council, Tuluksak Traditional Council, Kenai Fish and Wildlife Field Office, Togiak National Wildlife Refuge, and Yukon Delta National Wildlife Refuge. All of these groups have projects that include the collection of salmon ASL samples and depend on ADFG Commercial Fisheries Division for processing samples.

JUSTIFICATION

The proposed work addresses an important research and monitoring needed by supporting standardization and quality control for the collection, analysis and documentation of analysis techniques for use by the fishery managers. This information is used to monitor sex, age and size composition of commercial, subsistence fisheries and escapement projects; develop brood tables to assess management actions, develop run strength outlooks, and describe spawner recruit relationships.

Project Number:	07-304
Project Title:	Tatlawiksuk River Salmon Weir
Geographic Region:	Kuskokwim
Data Type:	Stock Status and Trends
Principal Investigator:	Douglas Molyneaux,, ADFG Division of Commercial Fisheries
Co-Investigator(s):	David Orabutt, Kuskokwim Native Association Dan Costello, ADFG

Cost: 2007: $154,665 **2008:** $161,777 **2009:** $176,134

ISSUE

Tatlawiksuk River salmon contribute to subsistence, commercial, and recreational fisheries within the Yukon Delta National Wildlife Refuge. The status of salmon populations within the drainage, including Tatlawiksuk River, has been of concern due to low run abundance. Tatlawiksuk River weir is one of several projects used to develop reliable estimates of abundance, run timing, stock structure, productivity, and carrying capacity of salmon stocks in the Kuskokwim Region, which is identified by Office of Subsistence Management as a priority information need. The project provides fundamental escapement information necessary to facilitate in-season management decisions and to assess trends in salmon populations. This project is essential as a platform for several other projects and for developing escapement goals as is currently in consideration. This project also incorporates substantial capacity building and outreach components.

Salmon escapements to Tatlawiksuk River weir have been monitored successfully since 1999. Information from this project has become integrated into the annual management process, by providing insights into escapement and stock specific run timing through the fishery. The escapement age, sex, and length information collected at Tatlawiksuk River provides part of the context needed to assess the impacts of subsistence harvest practices *(Age, Sex, and Length Composition of Lower Kuskokwim River Subsistence Chinook Harvest*, FIS #04-354).

OBJECTIVES

1. Determine daily and total annual Chinook, chum, and coho salmon escapements to Tatlawiksuk River from 15 June to 20 September;
2. Estimate age, sex, and length composition of annual Chinook, chum, and coho salmon escapements;
3. Monitor habitat variables including daily water temperature, water level, and stream discharge;
4. Provide mentorship and administer education curriculum to Kuskokwim Native Association high school interns; and,
5. Serve as a platform to facilitate current and future fisheries research projects.

METHODS

Investigators will install a resistance board weir on the lower Tatlawiksuk River. A live trap will be used to sample salmon for scales, sex and length information, and for tag recovery. Investigators will also record daily water temperature, water level, and weather conditions. A local technician hired by the Kuskokwim Native Association will operate the project along with a lead crew member provided by ADFG. The project will also serve as a platform to host students from the Kuskokwim Native Association Student Internship Program.

PARTNERSHIP/CAPACITY BUILDING

Kuskokwim Native Association and ADFG have been cooperators on salmon escapement enumeration projects on the George and Tatlawiksuk Rivers since 1996 and 1998, respectively. Oversight of field operations is shared between the Kuskokwim Native Association and ADFG Division of Commercial Fisheries. ADFG takes the lead in data management, data analysis and reporting; however, more of this responsibility is expected to shift to the Kuskokwim Native Association. This budget also includes approximately $25,000 annual funding support for ADFG senior scientists, and $16,000 annual funding support for the Kuskokwim Native Association senior scientists.

JUSTIFICATION

The Tatlawiksuk River weir is an established and successful cooperative project operated by Kuskokwim Native Association and ADFG. The project provides valuable escapement and biological sampling data for salmon stocks in an important sub basin of the Kuskokwim River, promotes local involvement, and develops the capacity of Kuskokwim Native Association to monitor fish populations.

Project Number:	07-305
Project Title:	Kanektok — Goodnews River Salmon Run Assessment Projects
Geographic Region:	Kuskokwim
Data Type:	Stock Status and Trends
Principal Investigator:	John Linderman, ADFG Division of Commercial Fisheries
Co-Investigator(s):	Edward Mark, Native Village of Kwinhagak Mark Lisac, USFWS Togiak National Wildlife Refuge

Cost: **2007:** $108,900 **2008:** $101,000 **2009:** $104,600

ISSUE

This proposal will fund the operations of two resistance-board weirs currently utilized on the Kanektok and Goodnews Rivers (funding here is requested to extend the operational period for the Goodnews River weir to better enumerate coho salmon stocks). Both of these projects enumerate all five species of salmon found in Alaska, as well as, Dolly Varden. Escapement information and biological data collected at these projects are valuable for setting escapement objectives, determining run timing, assessing the age structure of the returns, and enumerating adult salmon spawners.

OBJECTIVES

1. Enumerate daily and annual total passage of Chinook, chum, sockeye, and coho salmon, and Dolly Varden through the Kanektok and Middle Fork Goodnews River weirs.
2. Describe the run-timing or proportional daily passage of Kanektok River Chinook, chum, sockeye, and coho salmon and Middle Fork Goodnews River coho salmon.
3. Estimate the sex, age, and length composition of Kanektok River Chinook, chum, sockeye, and coho salmon escapements and Middle Fork Goodnews River coho salmon escapement such that simultaneous 90% confidence intervals have maximum width of 0.20.
4. Monitor environmental variables at the project sites such as relative water level, discharge rate, and water temperature.

METHODS

A resistance-board weir will be installed in the Kanektok and Goodnews Rivers to enumerate passage of the five species of salmon found in Alaska and Dolly Varden. The projects will also act as a platform for the collection of biological samples (age-sex-length, genetics, scales, etc.). This information will be used to assess the returns to these systems.

PARTNERSHIPS/CAPACITY BUILDING

Goodnews weir will be staffed by two ADFG Fish and Wildlife Technicians and one local hire USFWS Fisheries Technician.

The Kanektok River weir is operated cooperatively by ADFG, Native Village of Kwinhagak, and USFWS Togiak National Wildlife Refuge.

Regular consultations between ADFG, the Native Village of Kwinhagak, USFWS, CVRF and local stake holders will occur throughout the year to coordinate logistics, discuss results, and exchange ideas.

JUSTIFICATION

The Goodnews and Kanektok River weirs are established and successful monitoring projects that provide the primary escapement and run strength data used to ensure sustainability of Kuskokwim Bay subsistence fisheries and conserve fisheries stocks in the Goodnews and Kanektok Rivers. This proposal would support continued operations of both the Kanektok and Goodnews River weirs for a complete field season enumerating escapements of Chinook, sockeye, chum and coho salmon. These projects also serve as important platforms for ongoing Dolly Varden char research being conducted by the Togiak NWR.

Project Number:	07-306
Project Title:	Kwethluk River Salmon Weir
Geographic Region:	Kuskokwim
Data Type:	Stock Status and Trends
Principal Investigator:	Ken Harper, USFWS Kenai Fish and Wildlife Field Office
Co-Investigator(s):	Native Village of Kwethluk

Cost: 2007: $176,157 **2008:** $187,863 **2009:** $190,403

ISSUE

Management of Kuskokwim Area salmon fisheries is complex because of annual variability in run size and timing, harvesting of mixed stocks, overlapping runs of multiple species, allocation issues, and the immense size of the Kuskokwim River drainage. Fishery managers need salmon escapement data from representative rivers that contribute to this complex mixed stock subsistence fishery. Investigators will collect data on chum, Chinook, sockeye, and coho salmon.

OBJECTIVES

1. Enumerate the daily passage of Chinook, chum, sockeye, and coho salmon and resident fish species through the weir.
2. Describe the run-timing or proportional daily passage of Chinook, chum, pink, sockeye, and coho salmon through the weir.
3. Estimate the weekly sex and age composition of Chinook, chum, and coho salmon such that simultaneous 90% confidence intervals have a maximum width of 0.20.
4. Estimate the mean length of Chinook, chum and coho salmon by sex and age.
5. Enumerate the number of Chinook, chum, pink, sockeye, and coho salmon carcasses that wash down onto the weir each day.
6. Monitor passage of any salmon (Chinook, chum, sockeye and coho salmon) that may be tagged in middle Kuskokwim River mark recapture studies.

METHODS

Investigators will install a resistance board weir across the Kwethluk River, 78 river kilometers upstream from the Kuskokwim River. Salmon will be counted as they pass through a counting chute located on a live trap. Weekly samples of length, sex, and scales will be collected from fish passing up stream, and gill net marks will be noted before releasing sampled fish up-stream from the weir. Local technicians hired by the Organized Village of Kwethluk will be trained by the Kenai Fish and Wildlife Field Office in weir operations and biological sample collection methodology.

PARTNERSHIP/CAPACITY BUILDING

Capacity building will continue, as the USFWS mentors and trains 3–5 village technicians in project operations. This project reaches the cooperation level of capacity building (level 5) and potentially could fully become a partnership of equals between the USFWS and the Organized Village of Kwethluk. We have developed a formal agreement that has been signed by both parties committing the Service to making it a priority to train village personnel for crew and possible leaders. Under this signed agreement, the village has agreed to recruiting technicians with the understanding that they will be expected to follow a set work schedule to ensure proper function of the project. The village will also have technicians available to assist with and learn the process of installation and removal of the weir. They will participate in the operation and collection of escapement data. This will provide an educational basis for employees and the village government to further their understanding of the management of lower Kuskokwim River commercial and subsistence fisheries.

In partnership with the Association of Village Council Presidents and their Partners Biologist the Kenai Kenai Fish and Wildlife Field Office office is currently working with Association of Village Council Presidents and the Yukon Delta National Wildlife Refuge and planning for hosting science camp students at the weir in 2006 and beyond. The Kenai Fish and Wildlife Field Office will provide biologists to mentor students when they spend time at the fish weir. It is expected that the Partners Biologist will be available to work at the weir when needed to expand their understanding of the weir. This educational mentoring will be crucial in developing future village weir technicians, crew leaders, and biologists at these projects.

JUSTIFICATION

The Kwethluk River weir is an established and successful monitoring project that provides escapement and run strength data used to ensure sustainability of subsistence fisheries and conserve fisheries stocks in the Kwethluk River. There is a strong Federal Nexus with the Yukon Delta National Wildlife Refuge; and the Kwethluk River salmon stocks are harvested by a large lower river subsistence fishery, and pass through a commercial fishing district between the Kuskokwim and the Kwethluk River mouths.

Project Number:	07-307
Project Title:	Salmon Run Timing and Abundance in the Tuluksak River
Geographic Region:	Kuskokwim
Data Type:	Stock Status and Trends
Principal Investigator:	Ken Harper, USFWS Kenai Fish and Wildlife Field Office
Co-Investigator(s):	Tuluksak Native Community

Cost: 2007: $154,061 **2008:** $159,574 **2009:** $173,610

ISSUE

Management of Kuskokwim Area salmon fisheries is complex because of annual variability in run size and timing, harvesting of mixed stocks, overlapping runs of multiple species, allocation issues, and the immense size of the Kuskokwim River drainage. Fishery managers need salmon escapement data from representative rivers that contribute to this complex mixed stock subsistence fishery. Investigators will collect data on chum, Chinook, sockeye, and coho salmon.

OBJECTIVES

1. Enumerate the daily passage of Chinook, chum, sockeye, and coho salmon and resident fish species through the weir.
2. Describe the run-timing or proportional daily passage of Chinook, chum, pink, sockeye, and coho salmon through the weir.
3. Estimate the weekly sex and age composition of Chinook, chum, and coho salmon such that simultaneous 90% confidence intervals have a maximum width of 0.20.
4. Estimate the mean length of Chinook, chum and coho salmon by sex and age.
5. Enumerate the number of Chinook, chum, pink, sockeye, and coho salmon carcasses that wash down onto the weir each day.
6. Monitor passage of any salmon (Chinook, chum, sockeye and coho salmon) that may be tagged in middle Kuskokwim River mark recapture studies.

METHODS

Investigators will install a resistance board weir across the Tuluksak River 49 river kilometers (rkm) upstream from the confluence with the Kuskokwim River. Salmon will be counted as they pass through a counting chute located on a live trap. Weekly samples of length, sex, and scales will be collected from fish passing up stream, and gill net marks will be noted before releasing sampled fish up-stream from the weir. Local technicians hired by the Tuluksak Native Community will be trained by the Kenai Fish and Wildlife Field Office in weir operations and biological sample collection methodology.

PARTNERSHIP/CAPACITY BUILDING

Capacity building will continue, as the USFWS mentors and trains 3–5 village technicians in project operations. This project reaches the cooperation level of capacity building (level 5) and potentially could fully become a partnership of equals between the USFWS and the Tuluksak Native Community. We have developed a formal agreement that has been signed by both parties committing the Service to making it a priority to train village personnel for crew and possible leaders. Under this signed agreement, the village has agreed to recruiting technicians with the understanding that they will be expected to follow a set work schedule to ensure proper function of the project. The village will also have technicians available to assist with and learn the process of installation and removal of the weir. They will participate in the operation and collection of escapement data. This will provide an educational basis for employees and the village government to further their understanding of the management of lower Kuskokwim River commercial and subsistence fisheries.

In partnership with the Association of Village Council Presidents and their Partners Biologist the Kenai Fish and Wildlife Field Office is currently working with the Association of Village Council Presidents and the Yukon Delta National Wildlife Refuge and planning for hosting science camp students at the weir in 2006 and beyond. The Kenai Fish and Wildlife Field Office will provide biologists to mentor students when they spend time at the fish weir. It is expected that the Partners Biologist will be available to work at the weir when needed to expand their understanding of the weir. This educational mentoring will be crucial in developing future village weir technicians, crew leaders, and biologists at these projects.

JUSTIFICATION

The Tuluksak River weir is an established and successful monitoring project that provides the escapement and run strength data used to ensure sustainability and conservation of fisheries stocks in the Kuskokwim River. There is a strong federal nexus with the Yukon Delta National Wildlife Refuge; and the Tuluksak River salmon stocks are harvested by a large lower river subsistence fishery, and pass through a commercial fishing district between the Kuskokwim and the Kwethluk river mouths.

Project Number:	07-401
Project Title:	Stock Assessment and Restoration of the Afognak Lake Sockeye Salmon Run
Geographic Region:	Southwest
Data Type:	Stock Status and Trends
Principal Investigator:	Steven Honnold, ADFG Division of Commercial Fisheries
Co-Investigator(s):	Stephen Schrof and Robert Baer, ADFG Division of Commercial Fisheries

Cost: 2007: $76,726 **2008:** $76,726 **2009:** $81,039

ISSUE

The investigators will continue to assess sockeye salmon production at Afognak Lake in response to the declining adult runs that began in 2001 and have continued through 2005. In response to the declining runs from 2001 to 2004, State and Federal managers closed subsistence fishing in early June during the 2002 season, and in-season closures have occurred each year through 2005 in an attempt to achieve the escapement goals for sockeye salmon into Afognak Lake. This project will continue investigations started in 2003 that were intended to develop possible strategies for increasing future sockeye salmon production for the subsistence fishery in Afognak Bay. Moreover, the Kodiak/Aleutians Subsistence Regional Advisory Council has determined the Afognak Lake sockeye assessment and monitoring project to be one of their highest priority issue and information needs.

OBJECTIVES

1. Estimate the number, age, and average size at age of sockeye salmon smolt emigrating from Afognak Lake from 2007–2009.
2. Evaluate the water chemistry, nutrient status, and plankton production of Afognak Lake from 2007–2009.
3. Assess the rearing conditions for juvenile sockeye salmon in Afognak Lake based upon completion of objectives 1 and 2.

Methods

A smolt trap will be installed in the Afognak River to capture a portion of the sockeye salmon smolt outmigration from Afognak Lake. Trap efficiency will be determined using mark-recapture techniques in order to estimate the total sockeye salmon smolt outmigration from Afognak Lake. Associated trapping, handling, and marking mortality will be determined.

The ADFG field crew will collect age, weight, and length data from 40 sockeye salmon smolt per day for five consecutive days per week. These data will be used to estimate the age composition and average length, weight and condition factor by age of the Afognak Lake sockeye salmon smolt outmigration. ADFG staff will also collect limnology information from Afognak Lake, including water chemistry, nutrient, phytoplankton, zooplankton, temperature, dissolved oxygen, and light penetration data. Lake samples will be analyzed in Kodiak at the ADFG limnology laboratory. Investigators will use the smolt information along with limnology and other freshwater data to assess the carrying capacity for juvenile sockeye salmon in Afognak Lake.

PARTNERSHIPS/CAPACITY BUILDING

ADFG biologists are currently working with administrators in the Kodiak Island Borough School District's Rural Schools Office to educate students on the Afognak Lake sockeye salmon project and its importance to the subsistence users. ADFG biologists will travel to the Villages of Port Lions and Ouzinkie, and local Kodiak area schools for a visual presentation of the project. Contact with the Native Village of Afognak, Inc. is underway to foster a relationship for planning future trips to the project site for village members and discuss the work being done at the Afognak Lake system in an attempt to increase sockeye salmon production to Afognak Lake for subsistence purposes.

The ADFG will give preference to locals, including qualified residents of the Villages of Port Lions and Ouzinkie, when hiring sampling crews. If appropriate, internships will be developed through the University of Alaska to provide career-track positions. Local employees will be trained in various biological data collection techniques and will be educated in many research applications that assist with salmon management.

JUSTIFICATION

This project is of high strategic importance for the Kodiak Management Area, is technically sound, is a continuation of work successfully conducted since 2003, and has a reasonable schedule and budget for the proposed work. The investigators have a proven record of successfully conducting, administering, and completing other Fisheries Resource Monitoring Program projects. While capacity building would have been adequate as described in the original proposal, hiring local research assistants and developing the student internship for local residents represents a substantial improvement. The investigators have incorporated Technical Review Committee proposal recommendations concerning strengthening of capacity building and information sharing into the investigation plan.

Project Number: 07-402

Project Title: Buskin River Sockeye Salmon Stock Assessment and Monitoring, Kodiak, Alaska

Geographic Region: Southwest

Data Type: Stock Status and Trends

Principal Investigator: Donn Tracy, ADFG Division of Sport Fish

Cost: **2007:** $99,200 **2008:** $78,100 **2009:** $79,200

ISSUE

Investigators will annually enumerate escapement and sample age composition of sockeye salmon into the Buskin River drainage for inseason management of subsistence and other fisheries and development of a biological escapement goal. Investigators will also interview subsistence fishers to determine demographics of participants and use of harvested fish, and previous and potential future participation in subsistence fisheries in the area.

OBJECTIVES

1. Census the sockeye salmon escapement into Buskin and Louise Lakes from June 1 through August 15.
2. Estimate the age composition of the combined subsistence harvest in the Buskin River Section of Chiniak Bay and sockeye salmon escapement into Buskin Lake from June 1 to August 15 such that the estimates are within 5 percentage points of the true value 95% of the time.
3. Estimate the age composition of the sockeye salmon run to Louise Lake from June 1 to August 15 such that the estimates are within 7.5 percentage points of the true value 95% of the time.
4. Evaluate the sockeye salmon biological escapement goal.
5. Census the residence of subsistence fishery participants.
6. Estimate the distribution of use of subsistence-harvested fish, and the historic and potential future use of the Buskin River subsistence fishery such that all estimates are within 8 percentage points of the true values 95% of the time.

METHODS

Investigators will install a salmon counting weir on the Buskin River and Lake Louise tributary to annually census the spawning escapement of sockeye salmon. Additionally, sockeye salmon will be sampled at the weirs and from the subsistence harvest for age, sex and length, providing estimates of the combined escapement and subsistence harvest by age within 25% of the true values 95% of the time. Analyses of the return and age data will be incorporated into a brood table. Past estimates of total return, using sample sizes similar to those proposed here have been associated with a relative precision of about 12%. Collection of return and age data at this level of sampling will improve information in the brood table and, subsequently, evaluation of the biological escapement goal. Participants in the fishery will be surveyed to estimate the residency and fish stock(s) traditionally harvested by fishery participants.

PARTNERSHIPS/CAPACITY BUILDING

The investigators promote local hire of federally qualified subsistence users as project technicians. During each year of funding the investigators will continue a student intern program established in 2003 to provide education and career development opportunity for subsistence users. Through cooperation with the Kodiak National Wildlife Refuge (KNWR) the investigators have utilized the Buskin River weir as an educational tool for the KNWR Summer Science and Salmon Camp program.

JUSTIFICATION

This project addresses priority information needs for the Kodiak Management Area, is technically sound, is a continuation of work successfully conducted since 2000, and has both a reasonable schedule and budget for the proposed work. The investigators have a proven record of successfully conducting, administering, and completing other Fisheries Resource Monitoring Program projects. The investigators were responsive to recommendations made by the Technical Review Committee during their review of the initial proposal, and were generally successful in addressing these within the investigation plan. Further clarification is needed within the Methods section concerning the reasoning behind the investigators' decision to interview 150 subsistence fishers during the season and why this would result in estimates of "the distribution of use of subsistence-harvested fish, and the historic and potential future use of the Buskin River subsistence fishery…that…are within 8 percentage points of the true values 95% of the time." Finally, minor discrepancies in subsistence harvest numbers for 2002 and 2003 reported in the investigation plan should be resolved with harvest numbers for these years included in the 2004 annual report for project 04-414.

Project Number:	07-404
Project Title:	Estimation of Coho Salmon Escapement in Streams Adjacent to Perryville and Sockeye Salmon Escapement in Clark River, Alaska Peninsula National Wildlife Refuge
Geographic Region:	Southwest
Data Type:	Stock Status and Trends
Principal Investigator:	Jim Larson, USFWS, King Salmon Fish and Wildlife Field Office

Cost: 2007: $0 2008: $31,000 2009: $31,000

ISSUE

Conservation and subsistence concerns still exist for coho salmon stocks in the Kametolook drainage, and subsistence effort has expanded to adjacent drainages. During Regional Advisory Council meetings and at the Perryville Subsistence Working Group meetings, local residents stated that they were now taking coho salmon from other streams outside the immediate vicinity of Perryville. In many ways, these streams are similar to streams near Perryville in that they are short, high gradient streams with limited coho salmon abundance. In order to prevent over harvest of these small coho salmon stocks, escapement and harvest levels need to be monitored.

Sockeye salmon in the Chignik watershed are an important species for commercial and subsistence harvest. Subsistence fishers from the Chignik Villages target late run sockeye salmon. In recent years, subsistence fishers in the Chignik area have had difficulty harvesting enough late run fish and are concerned that this run has declined and may be over-exploited by the commercial fishery. We need to monitor sockeye salmon escapement in the Chignik watershed to ensure escapement is maintained to meet subsistence needs for residents of the Chignik villages.

The King Salmon Fish and Wildlife Field Office proposes to continue monitoring adult coho salmon returns in streams near Perryville, and to continue monitoring late run sockeye salmon returns to Clark River, a tributary to Chignik Lake. The run timing of these stocks is similar and lend themselves to concurrent monitoring. This project addresses Priority Need #1 for the Chignik Unit identified for the 2007 Fisheries Resource Monitoring Program by providing escapement information for late-run sockeye salmon in the Clark River, and addresses Priority Need #2 for the Chignik Salmon Unit by providing coho salmon escapement information for systems draining into Ivanof, Humpback, Anchor, and Ivan bays. Continuation of this project will increase baseline escapement data and provide a better understanding of run timing and adult production in these systems.

OBJECTIVES

1. Estimate minimum numbers of coho salmon returning to streams near the village of Perryville.
2. Estimate minimum numbers of late run sockeye salmon returning to the Clark River, a tributary to Chignik Lake.

METHODS

Two aerial surveys will be conducted annually (one in late September/early October, and one in mid to late October) using low-level helicopter flights. An observer will fly all of the chosen stream reaches in the study area (streams in Ivanof, Humpback, Anchor, and Ivan bays, and the Clark River) and count coho and sockeye salmon from a low-flying helicopter. We will coordinate our flights to avoid periods of turbid flow to minimize counting error. Our assumption is that aerial counts will provide a minimum estimate of escapement. We will not expand the counts.

PARTNERSHIPS/CAPACITY BUILDING

The project has developed partnerships between the villages of Perryville and Chignik and the King Salmon Fish and Wildlife Field Office through meetings that utilized the local knowledge to identify streams for monitoring. The local citizens have the knowledge of where fishing pressure has shifted with the closure of the local rivers, and thus where monitoring is necessary to ensure escapement needs are met. In-season communication with the local residents is also conducted to determine if salmon escapement is sufficient to satisfy subsistence needs in the survey area, and to coordinate survey timing.

JUSTIFICATION

This project is of high strategic importance for the Chignik Management Area, is a continuation of work successfully conducted since 2003, and has both a reasonable schedule and budget for the proposed work. The investigator has a proven record of successfully conducting, administering, and completing other Fisheries Resource Monitoring Program projects. While it would be preferable to have quantifiable objectives to monitor these runs, it would not be feasible or cost-effective to modify this project to accomplish this due to frequent storms, high water events, and the difficulty to access most of these streams.

Project Number:	07-405
Project Title:	Estimation of Sockeye Salmon Escapement into McLees Lake, Unalaska Island
Geographic Region:	Southwest
Data Type:	Stock Status and Trends
Principal Investigator:	Jim Larson, USFWS King Salmon Fish and Wildlife Field Office
Co-Investigator(s):	Sharon Livingston, Qawalangin Tribe Forest Bowers and Matt Foster, ADFG Division of Commercial Fisheries

Cost: 2007: $79,964 **2008:** $75,929 **2009:** $77,961

ISSUE

The King Salmon Fish and Wildlife Field Office is seeking to continue monitoring the sockeye salmon escapement into McLees Lake for an additional three years. Sockeye salmon returns to McLees Lake have varied greatly over the past five years ranging from 12,097 in 2005 to 101,793 in 2002. Continuation of this project will increase the baseline escapement data and provide a better understanding of system productivity. A better understanding of productivity is necessary to manage the subsistence fishery and know the level of exploitation on this stock. If annual production results in run sizes around the 2005 escapement, there is the potential for this stock to be highly exploited. However, if the 2002 and 2003 escapements are typical, then concerns of high exploitation are not warranted at the current harvest level. At this time we do not have a clear pattern of escapement into McLees Lake. Without this information the management of the subsistence fishery will be conservative. Conservative management could limit subsistence fishing opportunities unnecessarily. If the need for an escapement goal arises in the future, the continued monitoring we propose will provide information necessary for the development of an escapement goal for this system. Managers need a better understanding of McLees Lake sockeye salmon production to maximize subsistence opportunities while protecting the health of the population. Additionally, continuation of this project will provide information needed to determine the effects the large escapements of 2002 (97,780) and 2003 (101,793) had on the dynamics of this stock. The sockeye salmon run is important to local subsistence users in Unalaska.

OBJECTIVES

1. Enumerate the daily passage of sockeye salmon through the weir;
2. Describe the run-timing, or proportional daily passage, of sockeye salmon through the weir;
3. Estimate the sex and age composition of sockeye salmon such that simultaneous 90% confidence intervals have a maximum width of 0.20; and
4. Estimate the mean length of sockeye salmon by sex and age.

METHODS

The U.S. Fish and Wildlife Service will install and operate a flexible picket weir at the outlet of McLees Lake. The weir will be operated from approximately May 30 to August 15 during each year of the project. A trap and holding area will be located on the upstream side of the weir to facilitate sampling

and passing adult salmon through the weir. Fish will be passed and counted intermittently between 0800 and 2300 hours each day. All fish passing upstream will be identified to species and enumerated. Data on sockeye salmon age, sex, and length will be collected weekly. Sampling will consist of measuring length, determining sex, collecting scales, and then releasing the fish upstream of the weir.

PARTNERSHIP/CAPACITY BUILDING

This project will assist in developing partnerships between the U.S. Fish and Wildlife Service, the Qawalangin Tribe of Unalaska, and the Alaska Department of Fish and Game. Capacity building will occur with the Qawalangin Tribe by their direct participation in the collection of escapement data that will be used to develop management strategies for the Reese Bay subsistence fishery. The King Salmon Fish and Wildlife Field Office crew leader will act as a mentor with the purpose of training the local technicians to become crew leaders for future weir operations. Local technicians will be trained in the installation and operation of a fish weir, biological sampling procedures, and data collection and verification methods. In conjunction with the University of Alaska Fairbanks Marine Advisory Program representative, annual project presentations will be given to the community of Unalaska.

JUSTIFICATION

This project is of high strategic importance for the Aleutian Islands Management Area, is technically sound, is a continuation of work successfully conducted since 2001, and has both a reasonable schedule and budget for the proposed work. The Principal Investigator has a proven record of successfully conducting, administering, and completing other Fisheries Resource Monitoring Program projects. The investigators addressed Technical Committee proposal review comments by including information on variance estimates for mean length in the Methods section for Objective 4 and omitting Objective 5 concerning escapement goal development. The investigators also need to include information in the Methods section on their intention to report standard errors and ranges of mean lengths, by age and sex, as they have done for projects 01-059 and 04-403.

Project Number:	07-408
Project Title:	Stock Assessment of Rainbow Smelt in the Togiak River
Geographic Region:	Southwest
Data Type:	Stock Status and Trends
Principal Investigator:	Jim Larson, USFWS King Salmon Fish and Wildlife Field Office
Co-Investigator(s):	Robbin LaVine, Bristol Bay Native Association Pat Walsh, USFWS Togiak National Wildlife Refuge

Cost: 2007: $78,141 **2008:** $78,352 **2009:** $31,827

ISSUE

Rainbow smelt are among the most harvested non-salmon fish by subsistence users in the villages of Togiak and Twin Hills. The only information on smelt in southwest Alaska is the documented subsistence harvest surveys conducted by ADFG and Bristol Bay Native Association. Conservation managers need basic life history data such as sex and age composition, in addition to harvest information, to maximize subsistence opportunities while continuing to protect the health of the population. This project would be the first steps in furthering our understanding of the life history of an important subsistence species. This project addresses two of the six priority information needs for the Bristol Bay-Chignik non-salmon group.

OBJECTIVES

1. Estimate age and sex composition of spring spawning populations of rainbow smelt in the Togiak River such that simultaneous 90% confidence intervals have a maximum width of 0.20.
2. Estimate age and sex composition of rainbow smelt harvested by the winter subsistence fishery in the Togiak River such that simultaneous 90% confidence intervals have a maximum width of 0.20.
3. Estimate mean length of rainbow smelt in the Togiak River by sex, age, and time of year.
4. Describe the maturation rate from November to June.
5. Identify spawning locations and timing of rainbow smelt in the Togiak River.
6. Conduct larval assessment as index of relative run strength.

METHODS

A two-year sampling regime will begin in 2007 with winter sampling during the subsistence harvest season followed by spring sampling from mid-May through June 2008. Rainbow smelt will be harvested during the winter subsistence fishery and analyzed for age, length, sex, food habits, and maturity. Locations for sampling will be determined by accessing local knowledge of customary fishing areas; time and dates to fish will be scheduled to match as closely as possible the schedule used by the subsistence fishers. Fish will be frozen and shipped to the King Salmon Fish and Wildlife Field Office for processing. Beginning in May, a three person crew will access the lower Togiak River by boat, sampling for spawning locations, egg and larvae collection, run timing, and population characteristics. Sampling will be conducted using a long-handled dip net, a variable-mesh monofilament gill net and a seine net. Sampling

locations include a gravel bar located about 200 m upstream from the mouth of the Togiak River as well as other spawning areas correlated with the gull activity and other surface disturbances associated with spawning activity. We will examine each location with a small under-water video camera and sample the substrate directly below. This sampling regime will allow for comparison between fish targeted by the subsistence fishery in the winter and fish found in the river during the spring spawning run.

Spawning productivity estimates based on in-river, egg and larval density measurements will be used to develop an index of larval smelt abundance that will be used to monitor the long-term population trends of the Togiak rainbow smelt. Variation in vulnerability and catchability of adults can be a problem with other assessment techniques that use seines, trawls, gill nets or traps. Ichthyoplankton catchability, however, is relatively constant, as most targets are small (< 15 mm), and unable to avoid the nets. Fishing skill usually is not a complicating factor in capturing larvae so catchability or sampling variation is minimal. For these reasons, larval samples may provide better unbiased estimates of the population than samples from other gear types. Ichthyoplankton surveys that utilized replicate sampling and bootstrapping techniques derived consistent estimates with relatively tight confidence intervals.

PARTNERSHIPS AND CAPACITY BUILDING

The Bristol Bay-Chignik Area Planning Work Group identified the lack of information on rainbow smelt in the Togiak River as a high priority need (OSM 2005). King Salmon Fish and Wildlife Field Office will provide a crew leader for this project and will conduct the data analysis; Togiak National Wildlife Refuge will conduct the sampling of the winter subsistence fishery; Bristol Bay Native Association will provide technicians to assist in data collection. This project will assist in developing partnerships between the U.S. Fish and Wildlife Service, the Native Village of Togiak, and the Bristol Bay Native Association. Capacity building will occur with the Native Village of Togiak by their direct participation in the collection of life history data that will be used to develop management strategies for the Togiak River subsistence fishery. The King Salmon Fish and Wildlife Field Office crew leader will act as a mentor with the purpose of training the local technicians to become crew leaders for future fishery data-collection operations. Local technicians will be trained in the use of collection gear, boating, biological sampling procedures, and data collection and verification methods. In this manner, local community members will develop a greater sense of ownership of conservation programs, with the intent that technicians will return as crew leaders, and these crew leaders will later attend post-secondary and graduate schools to develop the professional skills needed to take charge of conservation research. In conjunction with the Togiak National Wildlife Refuge representative, annual project presentations will be given to the community of Togiak.

JUSTIFICATION

This proposal would address information needs of strategic importance for non-salmon fisheries within the Bristol Bay Management Area. While the Non-Salmon Fisheries Unit was ranked as a lower priority than either of the salmon fisheries units within the strategic plan, rainbow smelt is an important component of the Togiak subsistence harvest and very little information is available on this resource. The investigators successfully addressed all needed modifications contained within the Technical Review Committee's proposal review. The proposal is technically sound, has a reasonable schedule and budget for the proposed work, and investigators have a proven record of successfully conducting, administering, and completing other Fisheries Resource Monitoring Program projects.

Project Number: 07-452
Project Title: The Kvichak Watershed Subsistence Fishery: An Ethnographic Study
Geographic Region: Southwest
Data Type: Harvest Monitoring/Traditional Ecological Knowledge
Principal Investigator: James Fall, ADFG, Division of Commercial Fisheries
Co-Investigator(s): Davin Holen, ADFG, Division of Subsistence
Robbin La Vine, Bristol Bay Native Association Natural Resource Department
Theodore Krieg, ADFG, Division of Subsistence
Michelle Ravenmoon and Karen Gaul, NPS Lake Clark National Park and Preserve

Cost: 2007: $146,119 **2008:** $111,814 **2009:** $42,320

ISSUE

This ethnographic study will investigate how families in four communities of the Kvichak District of the Bristol Bay Management Area (Iliamna, Newhalen, Nondalton, and Port Alsworth) develop subsistence fishing strategies in response to changing sociocultural, economic, and environmental circumstances. Such ethnographic information about community patterns of subsistence use and adaptation is lacking, but is essential for the effective management of fisheries to provide for subsistence uses. Subsistence sockeye salmon harvests in the Kvichak District have declined since the early 1990s. Poor sockeye salmon returns are likely one factor responsible for declining harvests, but socioeconomic and sociocultural factors may be partly responsible as well. Further, the current household permit system may inadequately document participation, harvest levels, and harvest timing for at least some very active multi-household extended families, creating difficulties for tracking harvest trends. The three research questions are: (1) how do families make decisions about subsistence fishing in light of ever-changing sociocultural, economic, and environmental circumstances; (2) what factors shape annual variations in subsistence harvests of Kvichak fish, and (3) which of these factors shape long-term trends in the fishery. The study will use a combination of research methods organized in stages to build upon findings as the study progresses. The results will be directly useful for fisheries managers for interpreting changing subsistence harvest levels and participation rates for salmon and for nonsalmon fish and in providing more precise harvest data. Portions of this management area are within the Lake Clark National Park and Preserve; the proposed study communities are Resident Zone Communities of the park.

OBJECTIVES

1. Prepare an ethnographic description of the subsistence sockeye salmon fisheries of the communities of Nondalton, Newhalen, Iliamna, and Port Alsworth in 2007 regarding: the social organization of harvesting, processing, and distributing the catch; the location of harvests, including use of fish camps; gear types; and processing methods.
2. Estimate the subsistence sockeye salmon harvests, including harvests by location, date, and social group for Nondalton, Iliamna, Newhalen, and Port Alsworth in 2007.

3. Document the social context of subsistence fishing for salmon and other fish for four case study families over the course of one year as examples of community use patterns (2007/2008).
4. Describe the decision-making process of the four case study families in annual subsistence harvests of salmon and other fish, including adjustments made in response to resource abundance, the species selection process, and the selection of family members for harvesting.
5. Identify the social, cultural, economic and environmental factors that shaped subsistence salmon harvesting activities in Nondalton, Iliamna, Newhalen, and Port Alsworth in 2007.
6. Describe changing subsistence fishing strategies and patterns in the subsistence salmon fishery that have developed in the study communities over the last 20 to 25 years.

METHODS

(1) *A literature review* will identify trends in the Kvichak sockeye run and the subsistence fishery and help frame questions for key respondents and topics for the ethnographic fieldwork. (2) *Ethnographic fieldwork* during subsistence sockeye salmon fishing in the summer and fall of 2007 will address Objectives 2, 3, 5, and 6. The goal will be to describe the decision-making processes involved in subsistence fishing and organization of subsistence salmon harvesting. (3) *Family case studies* address Objectives 3, 4, 5, and 6. Documentation of subsistence activities and harvests of four families will take place over the course of a year (2007/2008) using logbooks, journals, photographs, and interviews. (4) *Key respondent interviews and oral histories* will contribute to meeting Objectives 1 and 2. About 20 interviews will record the history of fish camps, describe organizational principles of the subsistence fishery, and assess trends in the salmon run and subsistence fishing methods and harvests as informed by traditional knowledge. (5) *Systematic household harvest surveys* with about 20 to 30 households will address objective 2 and supplement 2007 harvest data from permits to help evaluate harvest data in light of observations about the social organization of fishing from the ethnographic fieldwork, family case studies, and key respondent interviews.

PARTNERSHIP/CAPACITY BUILDING

The project will be a collaboration between ADFG, NPS, and BBNA. NPS and BBNA local resident interns and other local resident research assistants will be trained to assist with literature review, ethnographic fieldwork, key respondent interviews, and harvest surveys. Case study families will be trained in data gathering methods and compensated for their involvement.

JUSTIFICATION

The Technical Review Committee recommends funding this proposal with modifications. The project addresses several high priority issues identified in the 2007 Request for Proposals, and is a strong collaborative effort. However, this is a highly ambitious and complex project, and while the data collection methods are technically sound, the various components are not well integrated into a cohesive project plan. Further, analysis and synthesis of the data are not well developed and investigator responsibilities and time commitments are not clearly delineated.

Project Number:	07-501
Project Title:	Tanada and Copper Lakes Burbot Abundance
Geographic Region:	Southcentral
Data Type:	Stock Status and Trends
Principal Investigator:	Molly McCormick, NPS
Co-Investigator(s):	Tom Taube, ADFG Sport Fish Division Shawn Sanford, Mentasta Village

Cost: 2007: $41,000 **2008:** $37,000 **2009:** $37,000

ISSUE

The Wrangell-St. Elias National Park/Preserve Superintendent is the local area manager for Federal subsistence fisheries in the Copper River drainage. Currently there are no Federal subsistence harvest limits established for freshwater fish species in the Copper River drainage including burbot. Therefore, when local rural residents request a subsistence permit to harvest burbot, we have no data to support limiting their harvest. This project will provide a population estimate for burbot in these lakes which we can use in cooperation with local users, Regional Advisory Councils and the Alaska Department of Fish and Game to establish appropriate burbot harvest limits using recognized fish and wildlife conservation principles.

OBJECTIVES

1. Estimate the length composition of fully recruited burbot ($\geq$ 450 mm TL) at Copper and Tanada lakes for each sampling event (Spring 2007, 2008 and 2009) such that the estimated proportions are within $\pm$ 10 percentage points of the actual values 95% of the time.
2. Estimate mean catch-per-unit of effort (CPUE) of burbot ($\geq$ 450 mm TL) in Copper and Tanada lakes for each sampling event (Spring 2007, 2008 and 2009) such that the estimated mean CPUE is within $\pm$ 50% of its asymptotic value 90% of the time.
3. Estimate the abundance of fully recruited burbot ($\geq$ 450 mm TL) in Copper and Tanada lakes for spring 2008 such that the estimated abundance is within $\pm$ 25% of the true abundance 90% of the time.

METHODS

Burbot will be captured in hoop traps, immediately following the lakes becoming ice-free in 2007. Transects will be established and baited traps will be set following standard methods similar to those described by Taube and Bernard (2004). Captured burbot will be marked and released. Traps will be reset using the same techniques in 2008 and 2009. Abundance, survival rate and recruitment estimates will be generated for each burbot population with the Jolly-Seber model (Seber 1982) for 2008. This model requires a minimum of three sampling periods (years) to provide an abundance estimate for the second sampling period. CPUE estimates will provide an index of abundance for each lake during each sampling event.

PARTNERSHIPS/CAPACITY BUILDING

This project will utilize local hire employees including residents of the Village of Mentasta. Local knowledge was used in developing the proposal and will be used in implementing the project. Results will be shared with the village councils of Mentasta and Chistochina during our biannual government to government meetings. The community of Mentasta is and will be involved in policy and decision making about the project objectives. While joint decision making is not institutionalized, through the Park's government to government relationship with the Village of Mentasta, the village is considered an equal partner and is consulted regarding local area management decisions whenever possible. We consider our level of community involvement to be between "Collaboration" and "Partnerships" in the diagram of community involvement in Fisheries Resource Monitoring Program Projects.

JUSTIFICATION

This proposal directly addresses an information need identified as a high priority in the strategic plan, and requested in the Request for Proposals. Further, this proposal is technically sound, administratively competent, and furthers capacity building commensurate with the nature of the work and the tribal cooperator.

Project Number: 07-502
Project Title: Tanada Creek Salmon Weir
Geographic Region: Southcentral
Data Type: Stock Status and Trends
Principal Investigator: Molly McCormick, NPS

Cost: 2007: $81,015 **2008:** $81,928 **2009:** $83,885

ISSUE

Accurate assessment of yearly run strength and migratory timing in tributaries to the Copper River is essential to the development of a management strategy that provides for natural and healthy populations as mandated by the Alaska National Interest Lands Conservation Act (ANILCA). The upper Copper River sockeye salmon populations are of particular importance to both Federally qualified and state subsistence users. Tanada Creek sockeye are one of the uppermost runs of sockeye on the Copper River and support a subsistence salmon fishery both in the Copper River and Tanada Creek. In-season escapement estimates are a useful tool to manage subsistence fisheries, particularly the subsistence fishery in the Batzulnetas area. The Park Superintendent at Wrangell-St. Elias National Park/Preserve is the Federal local area or in-season manager for the Copper River. The Batzulnetas subsistence fishery targets two sockeye salmon stocks that utilize Tanada Lake for spawning and rearing habitat. The Batzulnetas fishery and the entire Tanada Creek watershed, including Tanada Lake, occur within Wrangell-St.Elias National Park. The Batzulnetas subsistence fishery is primarily a fishwheel fishery, although spears, dipnets and rod and reel are also legal gear. In January 2006, the Federal Subsistence Board adopted a proposal to allow the use of a fyke net to harvest salmon in Tanada Creek. As we begin to implement the use of this new gear type, the Tanada Creek weir will be a crucial in-season management tool. The fishery occurs annually June through September. The Batzulnetas Area subsistence fishery has supported harvests of up to 997 salmon since 1987, primarily by fish wheel.

OBJECTIVES

1. To use a weir and a video counting tower to estimate the abundance of adult sockeye and chinook salmon in Tanada Creek and document the timing of the passage of these fish past the weir site between early June and mid-September.
2. To estimate the abundance of adult sockeye salmon in Tanada Creek using additional mark and recapture censuses should high flows cause fish leakage around the weir, such that estimates are within 10% of the actual abundance 95% of the time.
3. To measure the entry pattern of sockeye and chinook salmon to Tanada Creek and compare the entry pattern to the historic entry pattern data set to test for changes in annual run timing.
4. To estimate the age, sex and length of the sockeye population by sampling 10% of the sockeye salmon proportionate to their abundance with a minimum of 100 fish per week and a maximum of 100 fish per night.
5. To determine if correlations exist between staff gauge height and migration timing.
6. To instruct local students and residents regarding sockeye and chinook salmon populations and to link this knowledge to providing for subsistence needs and compliance with the mandates of ANILCA.

METHODS

In 2007 the weir will move to a more suitable location upstream of the confluence of Caribou Creek and Tanada Creek. The project will use a floating resistance board weir in conjunction with an underwater video system to enumerate the number of salmon migrating up Tanada Creek and to sample age, sex and length of a portion of the salmon migrating through the weir. The weir will be monitored seven days a week from late May through early to mid September for at least 10 hours per day. The video camera will run 24 hours a day, will be monitored on site and tapes will be reviewed at a viewing station on a daily basis. The weir will be open continuously unless sampling is being done. A portion of the sockeye salmon will be sampled for age, sex and length and marked. Scales will be sent to ADFG for analysis. Sampled salmon will be marked with an opercle punch. Live salmon and carcasses will be recovered and a mark-recapture estimate of the total population will be derived in late September if necessary. The weir and video will be removed from the water in late September. Data entry and analysis will take place in October and November. The annual and final reports will be written during the winter months.

PARTNERSHIPS/CAPACITY BUILDING

Several local groups are interested in the Copper River watershed. This project provides an opportunity to collaborate with local students, tribes and culture camps, nonprofits, and agencies to partner in the data collecting process. Biotechnician positions are currently filled under local hire designation. The Batzulnetas culture camp occurs in mid-summer. Annually camp attendees participate in an interpretive visit to the weir site to learn about subsistence fisheries management. Annual data is regularly discussed with them during their annual meetings. ADFG is willing to provide scale analysis. Wrangell-St. Elias National Park/Preserve has and will continue to collaborate with ADFG to examine sockeye salmon genetics and recover radio tagged sockeye salmon.

JUSTIFICATION

This is a long standing project under the Monitoring Program that addresses an important strategic priority. This project provides an instrumental tool for Federal management of the Batzulnetas subsistence fishery. Continued escapement assessment into Tanada Creek will complement results from project (05-501) to estimate stock-specific timing and distribution of sockeye stocks. The investigator addressed Technical Review Committee review comments to explore alternative technology that is more robust to frequent flood conditions, and pilot work will be conducted in 2006, including exploration of a new weir site. The requested budget is increased over historic costs to the Monitoring Program, is largely due to funding for the crew leader position previously funded outside of the Monitoring Program, and appropriately reflects actual project costs.

Project Number: 07-503
Project Title: Copper River Chinook and Sockeye Salmon Abundance
Geographic Region: Southcentral
Data Type: Stock Status and Trends
Principal Investigator: Keith van den Broek, Native Village of Eyak
Co-Investigator(s): Jason Smith and Michael Link, LGL Alaska Research Associates, Inc.
ADFG, Division of Commercial Fisheries

Cost: 2007: $372,456 **2008:** $366,726 **2009:** $373,093

ISSUE

Copper River chinook and sockeye salmon sustain large and important subsistence fisheries under Federal jurisdiction; and subsistence, commercial and sport harvests are significant in comparison to abundance. Management of Copper River sockeye salmon is complex due to inter-annual variation in the size and timing of stocks, fisheries that target a mixture of stocks and difficulties in estimating abundance due to the physical characteristics of the drainage. Recently, returns of salmon to several tributaries of the upper Copper River basin (e.g., Gulkana Hatchery, Tanada Creek weir) have been lower than expected given the acoustic-based estimates of abundance obtained from the Miles Lake sonar site. To further confound certainty in the abundance estimates provided by the Miles Lake sonar, the Alaska Department of Fish and Game (ADFG) is currently upgrading their Bendix acoustic system with a newer and much different acoustic system (dual frequency identification sonar – DIDSON). The management system and management plans for Copper River sockeye salmon have been built around the old Bendix sonar counts. The degree of comparability of the old and new acoustic systems is uncertain and the efficacy of the original Bendix acoustic counter has never been independently validated with an alternative technique.

We propose to use an independent technique to validate estimates provided by the new acoustic system and to the extent it remains, the Bendix-based estimates at Miles Lake. The purpose of this project is to use mark-recapture methods to estimate the annual abundance of both chinook and sockeye salmon returning to the Copper River above Miles Lake and compare these estimates to those provided by the Miles Lake sonar gear. The information collected from this project can be used by fishery managers to better manage the subsistence fishery for individual stocks, which ultimately could lead to increased subsistence harvest opportunities. This project will also continue the efforts begun in 2001 by the Native Village of Eyak (NVE) to develop a long term monitoring program for Copper River chinook salmon. This component of the proposed project will remain important until acoustic technology advances to such a stage as to allow for accurate species apportionment of counts at Miles Lake. The need for continued study of annual sockeye salmon escapement will be reassessed after reviewing results from the 2007 season.

OBJECTIVES

1. To estimate the inriver abundance of sockeye salmon returning to the Copper River in 2007, such that the estimate is within 25% of the true value 95% of the time.
2. To continue a long-term monitoring program operated by the Native Village of Eyak, estimating the annual, system-wide escapement of chinook salmon to the Copper River using mark-recapture techniques such that the estimate is within 25% of the actual escapement 95% of the time.

METHODS

This project will use two-event mark-recapture methods to estimate the annual abundance of chinook and sockeye salmon at Baird Canyon in 2007, and chinook salmon in 2008–09. For the first event, salmon will be PIT-tagged daily at three fishwheels operated in Baird Canyon (rkm 66) from mid May to mid August. These fishwheels will be located upstream of the Miles Lake sonar site and downstream of any inriver fisheries and major spawning tributaries. The second event will consist of fish examined for tags using digital video and automated PIT tag readers at two fishwheels located near Canyon Creek (rkm 157), located 12 km downstream of Chitina, AK. The fishing sites at Baird Canyon and Canyon Creek have been used successfully by the project team for these purposes since 2001.

PARTNERSHIPS/CAPACITY BUILDING

This project gives the Native Village of Eyak an opportunity for meaningful inclusion in the research and long-term management of Copper River chinook and sockeye salmon. They will oversee all aspects of the project and provide critical logistical, technical and field assistance, thereby acquiring the array of skills needed to carry out major fisheries assessment projects. The Native Village of Eyak fishery technicians will acquire the necessary skills and experience required for this and other fisheries research jobs. This project will allow the Native Village of Eyak to further develop the skills of its members via local training, hiring for key positions in future fisheries assessment projects, and recruiting and encouraging young people to get an education in fisheries and natural resource management. This project will also promote interaction between a major subsistence group (Native Village of Eyak) and fisheries management agencies (ADFG Division of Commercial Fisheries). Finally, the overall study design will engage tribal organizations from different regions of the Copper River drainage in discussions on the project and promote interactions amongst subsistence users. The Native Village of Eyak will continue to work with the Tribal Council, staff, consultants and government agencies to identify key personnel to help carry on a long-term program.

JUSTIFICATION

This proposal ranks high in all evaluation criteria, and directly addresses the highest priority information need identified in the 2007 Request for Proposals and strategic planning for this region. Previously funded projects by these investigators that address this same strategic priority were technically sound and administratively competent. This study design contains appropriate modifications to address sampling of sockeye salmon on a production basis, and should also reduce costs for further assessment of Chinook salmon. The Native Village of Eyak has served as an effective and high profile Principal Investigator, providing arguably the best example of capacity building under the Monitoring Program. The need to continue abundance estimation of sockeye salmon will be evaluated, and proposed after 2007 if appropriate.

Project Number: 07-505
Project Title: Long Lake Salmon Weir
Geographic Region: Southcentral
Data Type: Stock Status and Trends
Principal Investigator: Molly McCormick, NPS
Co-Investigator(s): Kristen Smith, Copper River Watershed Project

Cost: 2007: $19,252 **2008:** $19,698 **2009:** $20,121

ISSUE

Accurate assessment of yearly run strength and migratory timing in tributaries to the Copper River is essential to the development of a management strategy that provides for natural and healthy populations as mandated by the Alaska National Interest Lands Conservation Act (ANILCA). The Upper Copper River sockeye salmon populations are of particular importance to both federally qualified and state subsistence users. The sockeye salmon stock that spawns within Long Lake is the largest salmon stock within the Chitina River drainage. The Chitina River drainage, approximately 5 million acres in size, is the largest anadromous drainage contained in its entirety, within the Wrangell-St. Elias National Park/ Preserve. In addition, the Long Lake population has the longest known annual spawning duration of any sockeye salmon population in North America (Ken Roberson, personal communication). Therefore, this system is an excellent candidate for a long term monitoring site. Weir counts of salmon are a simple and basic dataset and therefore likely to provide valuable data far beyond the foreseeable future. Thirty-two years of weir show annual variations in abundance of Long Lake runs ranging from 4,400 to over 49,000 sockeye. This is the longest running data set of weir counts of salmon in the Copper River drainage.

The Alaska Department of Fish and Game (ADFG) initially operated the Long Lake weir, which stands on private property owned by the Collins family, in 1974 and 1975. In 1976 Cliff Collins voluntarily took over operation of the weir when ADFG was no longer able to fund the operation of the weir. He operated the weir continuously until 2003 when the Wrangell-St. Elias National Park/Preserve and the Copper River Watershed Project became partners with the Collins family trust in the operation of the weir.

Subsistence use of Copper River salmon occurs downstream of the Chitina River drainage in the Chitina Subdistrict of the Upper Copper River District. Federal subsistence users harvested approximately 20,000 salmon here in 2005 using dipnets. Harvest by as many as 10,000 households occurs in a state managed fishery that has been both a subsistence and personal use fishery harvesting as many as 125,000 salmon annually some years. These fisheries undoubtedly harvest some salmon returning to Long Lake.

OBJECTIVES

1. To enumerate the number of sockeye salmon entering Long Lake from July 1 to mid-September, thereby continuing a data set initiated in 1974.
2. To measure the entry pattern of sockeye salmon to Long Lake and compare the entry pattern to the historic entry pattern data set to test for change in the interannual run timing.
3. To estimate age-sex-length composition of the Long Lake sockeye salmon population such that estimates are within 10 percent of the actual composition 95 percent of the time.

4. To correlate run timing and numbers of sockeye entering Long Lake with similar data from the Miles Lake sonar.

METHODS

The project will use a weir to enumerate the number of salmon migrating into Long Lake and to sample age, sex and length of a portion of the salmon migrating through the weir. The pickets will be installed in the rigid picket weir and the sampling box will be erected around July 15. The weir will be monitored on a daily basis from July 15 to around October 15 and all adult salmon passing through it will be enumerated. The weir will be closed when it is not monitored. A portion of the sockeye salmon will be sampled for age, sex and length. Scale samples will be sent to ADFG for analysis. The pickets will be removed from the weir in mid-October. Data analysis will take place in October and November. The performance reports, annual reports and final report will be written during the winter months.

PARTNERSHIPS/CAPACITY BUILDING:

The Wrangell-St. Elias National Park/Preserve has partnered with the Copper River Watershed Project to perform this project since 2003 and will continue to do so in 2006. The project should result in increased capacity of the Copper River Watershed Project, a non-profit group that works with the support of the State of Alaska, Federal agencies and local organizations to monitor fish, fish habitat and water quality within the Copper River watershed. The Park sees this site as integral to monitoring Park resources and intends to utilize both the Principal Investigator and his staff to assist in the operation of this weir and analysis of data and will fund these individuals through Park base funds.

JUSTIFICATION

This is the longest standing escapement project in the Copper River drainage and addresses an important strategic priority. Continued escapement assessment into Long Lake complements project 05-501 to estimate stock-specific timing and distribution of sockeye salmon stocks. Unique logistics make this project extremely cost-effective in comparison to other weir projects.

Project Number:	07-601
Project Title:	Hatchery Creek Sockeye Salmon Population Assessment
Geographic Region:	Southeast
Data Type:	Stock Status and Trends
Principal Investigator:	Glenn Chen, Bureau of Indian Affairs
Co-Investigator(s):	Jack Lorrigan, Organized Village of Kasaan Steve McCurdy, ADFG Sport Fish Division Sheila Jacobson, USDA Forest Service

Cost: 2007: $117,837 **2008:** $123,199 **2009:** $122,866

ISSUE

The Hatchery Creek drainage on Prince of Wales Island has supported extensive subsistence and sport harvests by both Alaska resident and non-resident anglers. It is of particular importance to Prince of Wales Island rural residents, as it provides for a unique sockeye salmon harvest opportunity due to the early run timing of this stock, and because this location is entirely accessible from the Island's road system. In recent years, state biologists have taken action via emergency closures and changes in sportfishing regulations, to protect this stock from over-exploitation. However, in spite of the importance of this system to multiple user groups, the Hatchery Creek sockeye salmon population has not been formally studied.

The Hatchery Creek watershed is a 4th order stream system located in the north-central portion of Prince of Wales Island, on the U.S. Forest Service Thorne Bay Ranger District (Tongass National Forest). It is a major tributary to Sweetwater Lake. A 1.5-meter waterfall is located approximately 0.4 km upstream of the stream's confluence with the lake. The falls are a major obstacle to upstream migration at all flows, and can delay migrating fish for weeks before passage can be negotiated. It is thought that the majority of Hatchery Creek's early run adult sockeye spawn above the falls, and their offspring rear in lakes within the upper watershed. Hatchery Creek fisheries have been the subject of regulatory and management action by the State. USDA Forest Service has constructed a boardwalk trail to the falls, and subsistence fishing occurs under Federal jurisdiction.

OBJECTIVES

1. Census the total annual abundance of early run adult sockeye salmon returning to spawn in the upper reaches of Hatchery Creek, via a weir operated from June 1–August 31 above the waterfall partial migration barrier.
2. Quantitatively estimate the age, sex, and length compositions from a sub-sampled proportion of these early run adult fish.
3. Determine the primary spawning locations, and time of spawning, for sockeyes that utilize the stream area upstream of the waterfall partial barrier (via radio telemetry).
4. Estimate harvest levels of sockeyes by subsistence and sport users.

METHODS

This proposal provides funding to estimate sockeye salmon escapement into Hatchery Creek Prince of Wales Island through a weir. The weir from the Karta River will be used, which significantly reduces cost in 2007. Little is know about sockeye salmon returns to this drainage, and the location of spawning locations will be determined through a radio tagging experiment. The sample size for the radio tagging experiment is 40 fish. Tracking will be accomplished through aerial surveys. Additionally, harvest at the falls fishery will be estimated through a harvest survey. All assessment will focus on what is believed to be early run fish, which support inriver harvests.

PARTNERSHIPS/CAPACITY BUILDING

The Organized Village of Kasaan will be provided funds to hire the lead field biologist, crew leader, and field technicians needed for this study; local hiring priority will be given to qualified personnel from the Hatchery, Native organizations, and the island's rural communities to fill these positions. This proposal represents the results of extensive interagency cooperation between fisheries and subsistence program personnel from the Organized Village of Kasaan, the USFS Craig Ranger District, ADFG Sportfish Division, and the BIA. Sharing of data among all of the agencies involved in this subsistence fishery will provide better information to improve management of Hatchery Creek sockeye salmon for all users.

JUSTIFICATION

This proposal addresses an issue of the highest strategic importance. Subsistence fishing in this system is under Federal jurisdiction, which is unusual for sockeye salmon fisheries in southeast. Exploitation is believed to be high, although there are no credible estimates of escapement. The need for the harvest survey of just the falls is not well developed. Approval of the harvest survey is contingent upon further assessment of need; and completion of the study design. The investigators should base the harvest survey upon proven and documented methodology from ADFG Sportfish Division.

Project Number: 07-604
Project Title: Klag Lake Subsistence Sockeye Salmon Stock Assessment
Geographic Region: Southeast
Data Type: Stock Status and Trends
Principal Investigator: Brian Woody, Sitka Tribe of Alaska
Co-Investigator(s): Terry Suminski, USDA Forest Service

Cost: 2007: $108,350 **2008:** $109,093 **2009:** $109,836

ISSUE

Because Klag Lake is one of the largest producers of subsistence sockeye salmon in Southeast Alaska and is so important to the people of Sitka, there is an obvious need for quantifiable escapement goals and the ability to regulate harvest opportunities to ensure that escapements are within goal ranges and adequately distributed through time. This Investigation Plan outlines three additional years of funding for the field project. Three additional years of stock assessment work at Klag Lake will enable fishery managers to begin setting scientifically-based escapement goals to manage the Klag Lake sockeye salmon run for sustainable subsistence harvests into the future.

OBJECTIVES

1. Estimate the escapement of sockeye salmon into the Klag Lake system, with the aid of a weir on the outlet stream of the lake and additional mark-recapture censuses, so that the estimated coefficient of variation is less than 10%.
2. Count the number and determine the timing of sockeye salmon returning to Klag Lake outlet stream through a weir.
3. Estimate the subsistence harvest of sockeye adults in the terminal area of Klag Bay so that the estimated coefficient of variation is less than 15%.
4. Describe the size, sex and age distribution of sockeye salmon adults returning to Klag Lake so that the estimated coefficient of variation is less than 5%.

METHODS

A weir will be installed in the outlet stream of Klag Lake and all salmonids entering the lake will be passed through a trap or holding pen and directly counted be the field crew. Counts of all fish passed through the weir will be recorded by species.

An on-site harvest survey will be conducted to estimate terminal harvest. A sampling design, stratified by gear type, will be used to estimate sockeye salmon harvest, and, if possible, fishing effort. The sport fishery will constitute one stratum, the subsistence fishers using gillnets and seines will comprise another. Given the low number of participants in the fishery, samplers will attempt to interview all participating boat groups.

Age, sex, and length data will be collected from adult sockeye salmon at the weir to describe the biological structure of the population. The crew will be instructed to sample at a rate of 20% in a systematic manner (e.g. sample every fifth fish) to avoid bias. The sampling rate may be adjusted upward or downward, depending on the size of the run, to achieve the sampling goal, but we will attempt to maintain consistent sampling rates through all parts of the run.

A stratified, two sample mark-recapture study is used to estimate sockeye salmon escapement into Klag Lake; a comparison between the estimate and the weir count tests the integrity of the weir and trap. Sockeye salmon passed through the trap are marked with fin clips, with marking stratified by time to allow separate estimation of different parts of the run should the weir fail or violations of mark recapture assumptions occur during some part of the run. The target daily marking rate at the weir is 15–20% of the run depending on the overall volume of the run.

PARTNERSHIP/CAPACITY DEVELOPMENT

It is the intention of all three partners that Sitka Tribe of Alaska and its members build on their capacity for management of their subsistence fishery resources. This project will give the Tribe an opportunity to increase its involvement as an organization in fisheries research and management, with active project leadership by the Tribe's biologist(s) and management of the project budget by the administrative staff. Through the joint involvement of the Sitka Tribe of Alaska, ADFG, and USFS in public and agency meetings on subsistence fishing issues, the project is already promoting interaction among Tribe staff and members, other subsistence users, and state and Federal fisheries managers and scientists. All three agencies will continue to be involved in information gathering, data analysis, reporting, and information sharing.

JUSTIFICATION

This is a solid proposal that ranks as *High* in all evaluation criteria. This proposal is technically sound and the investigators are administratively competent. As an outside stock, there is little competing harvest and exploitation is likely sustainable. However, Sitka has the largest concentration of Federally-qualified substance fishers in the region, the relative importance of Klag Lake increases in the event of reduced returns to Redoubt Lake, and there is compelling reason for the Monitoring Program to maintain assessment of important subsistence fisheries in Sitka Sound. The principal investigator is an Alaska Native organization and this project provides meaningful capacity building. The investigators addressed all Technical Review Committee comments regarding the harvest survey and costs.

Project Number:	07-606
Project Title:	Hetta Lake Subsistence Sockeye Salmon Stock Assessment
Geographic Region:	Southeast
Data Type:	Stock Status and Trends
Principal Investigator:	Jan Conitz, ADFG Division of Commercial Fisheries
Co-Investigator(s):	Tony Christianson, Hydaburg Cooperative Association Jeff Reeves, USDA Forest Service

Cost: 2007: $160,994 **2008:** $161,849 **2009:** $154,045

ISSUE

Investigators will collect information on sockeye salmon returning to Hetta Cove and Hetta Lake by interviewing subsistence fishers for the number of sockeye harvested in Hetta Cove and by counting salmon through a weir on the outlet stream of Hetta Lake. This information will be used to better establish subsistence needs, to monitor stock trends at Hetta Lake, and to assist fishery managers in ensuring that escapement and subsistence opportunities are adequate.

OBJECTIVES

1. Census the harvest of sockeye salmon by subsistence fishers in the terminal areas of Hetta, Eek, Kasook, and Hunter Bay, using completed-trip interviews of all fishers on the fishing grounds or immediately upon returning to Hydaburg from the fishing grounds.
2. Count the number of sockeye salmon and other salmonids returning to Hetta Lake through the weir.
3. Estimate the escapement of sockeye salmon into Hetta Lake using mark-recapture methods so that the estimated coefficient of variation is less than 10%.
4. Estimate the age composition of the sockeye escapement so that the coefficient of variation is 10% or less for the two major age classes and describe the size distribution of each age class by sex.

METHODS

The primary focus of this research will be to census the harvest of sockeye salmon in Hetta Cove by subsistence fishers, and to estimate the number of sockeye salmon escaping into Hetta Lake. The Hydaburg crew will interview all fishers at the completion of their subsistence fishing, and record the information daily. Investigators will operate a weir from the beginning of June to the end of September to count the number of salmon by species entering Hetta Lake. A mark-recapture study will also be conducted to test the integrity of the weir, marking fish at the weir and conducting mark-recovery sampling on the spawning grounds. The mark-recapture estimate of sockeye spawners will be used as the official sockeye escapement estimate if the weir fails. The ages of returning sockeye salmon will be described so as to be able to look at the lake's productivity on a year-specific basis.

PARTNERSHIPS/CAPACITY BUILDING

ADFG and Hydaburg Cooperative Association staff have worked closely for the last six years to ensure the success of the project and to increase the responsibility of the Hydaburg Cooperative Association each year. The goal is to have Hydaburg Cooperative Association take over the project by 2009. When they assumes total responsibility for the project, they will oversee the technical aspect of the project and ensure the completion of a final report for all three years of work.

JUSTIFICATION

This is a solid proposal that ranks as *High* in all evaluation criteria. This proposal is technically sound and the investigators are administratively competent. This system is in close proximity to significant commercial fisheries, the potential for significant competing harvest is high, subsistence exploitation is high, and there is evidence of very low escapements that could limit future returns. The investigators addressed all Technical Review Committee comments on this proposal to assess escapement and terminal subsistence harvest. Further, the investigators plan to transfer project supervision to Hydaburg Cooperative Association by 2009, which will meaningfully increase capacity building. At question for the future is how continued assessment data will be utilized by ADFG to assess the adequacy of escapements. As originally conceived by the investigators, justification for long-term assessment of this stock was in large part to provide data to make recommendations for an escapement goal. To achieve this goal, and to reduce costs to the Monitoring Program, the Technical Review Committee recommended that this proposal be further enhanced by assessment of this stock to mixed-stock and close proximity commercial fisheries. While there have been significant improvements in genetics technology, further research will be necessary before assessment of the harvest from this small stock is feasible. Also, there are significant issues with sampling these large commercial fisheries that must be addressed. As an alternative and to largely address the Technical Reveiw Committee's concerns with cost, the investigators have significantly reduced the proposed budgets for this and other projects (see 07-607, 608, and 609). The question of contribution of this stock to mixed-stock commercial fisheries is important to formulate recommendations for an escapement goal, and should be revisited upon advances in stock identification technology.

Project Number:	07-607
Project Title:	Kanalku Lake Subsistence Sockeye Salmon Stock Assessment
Geographic Region:	Southeast
Data Type:	Stock Status and Trends
Principal Investigator:	Jan Conitz, ADFG Division of Commercial Fisheries
Co-Investigator(s):	Ed Gamble, Angoon Cooperative Association Ben VanAlen, USDA Forest Service

Cost: 2007: $172,791 **2008:** $161,694 **2009:** $165,396

ISSUE

A voluntary subsistence fishing closure for Kanalku Bay and Creek was in place from 2002 to 2005 in the community of Angoon, in response to estimated escapements of fewer than 300 sockeye salmon in two recent years (2001 and 2003). A majority of Angoon residents supported the closure and abstained from fishing. However, the voluntary closure was not universally observed, and ADFG management biologists have decided to recommend it not be continued in 2006, instead restricting the regular subsistence season and possession limit. Federal subsistence management biologists have not yet decided whether to implement similar limits on the Federal portion of the Kanalku subsistence fishery (B. Van Alen USFS biologist, personal communication 2006). Because of the extremely low estimated escapements, and loss of vital subsistence harvesting opportunities for Angoon residents, accurate and ongoing escapement estimates are needed. We propose to rigorously test our mark-recapture estimation methods, guided by results of a telemetry study in 2006 to search for previously unidentified sockeye spawning areas in Kanalku Lake. If no additional spawning areas are found, we will continue the mark-recapture program used in 2001–2006, add a weir and video recording system to count fish entering the freshwater, and also monitor subsistence and sport fisheries in Kanalku Bay. If additional spawning areas are found via telemetry, we will incorporate a conventional weir and trap into our mark-recapture study to ensure the estimate captures all sockeye spawners entering Kanalku Lake.

OBJECTIVES

Plan A (no new spawning areas are identified in 2006 telemetry study)

1. Count sockeye salmon using a weir and video recording system in the lower part of Kanalku Creek.
2. Estimate harvest of sockeye salmon in the Kanalku subsistence and sport fisheries with estimated coefficient of variation less than 15%.
3. Estimate the annual spawning population of sockeye salmon in Kanalku Lake, using mark-recapture methods on the spawning grounds with estimated coefficient of variation less than 15%.
4. Estimate the age, sex, and size distribution of sockeye salmon in the Kanalku Lake.
5. Maintain an ongoing record of physical lake habitat variables including water column temperature and light intensity.

Plan B (additional spawning areas are found with telemetry in 2006)

1. Count sockeye salmon through a weir at the outlet of Kanalku Lake.
2. Estimate the number of sockeye salmon entering Kanalku Lake, using mark-recapture methods at the weir and on the spawning grounds with estimated coefficient of variation less than 10%.

Objectives 3, 4 and 5 are the same as in Plan A.

METHODS

Under Plan A, an underwater video camera and digital video recorder will be used to monitor passage of fish through a weir near the mouth of Kanalku Creek. Trained technicians will play back the video recordings daily to count fish by species, and will periodically check these counts against direct visual counts at the weir. Daily and cumulative total counts of fish, by species, will be compiled for the season. The crew will conduct a harvest survey in Kanalku Bay and Creek, counting all sport and subsistence fishers that enter the area, and obtaining harvest information from the fishers as they leave the area. Total harvest for the season will be estimated using a one-stage roving-access survey design. The spawning population of sockeye salmon in Kanalku Lake will be estimated using mark-recapture methods on the spawning grounds and an open population estimator. The age, sex, and length distribution of the Kanalku Lake sockeye spawning population will be estimated using standard methods. Light intensity and temperature profiles in Kanalku Lake will be measured monthly, and if funding permits, zooplankton population species composition, density, and biomass will be estimated from monthly samples.

Under Plan B, a conventional weir and trap will be placed near the Kanalku Lake outlet, and a sample of fish passing through the weir will be marked with adipose clips and uniquely-numbered tags. Video recording equipment will be used to monitor fish passage between sampling periods. Fish will be sampled again on the spawning grounds for marks and tags, and total escapement will be estimated using a closed population estimator. The spawning population will also be estimated as in Plan A using mark-recapture methods on the spawning grounds and an open population estimator. The weir-based estimate will be compared with the open population estimate on the spawning grounds to determine whether the spawning grounds estimate is an accurate measure of total escapement. Fish will be sampled at the weir for age, sex, and length distribution estimates. Lake light intensity and temperature profiles will be measured and zooplankton population variables will be estimated, if funding permits, as under Plan A.

PARTNERSHIPS/CAPACITY BUILDING

Angoon Cooperative Association has successfully managed hiring, personnel issues, payroll, budgeting, and procurement of supplies and services over the past five years as a cooperator in fisheries research projects. The Angoon Cooperative Association fisheries technicians will refresh or learn scale, age, and length sampling techniques, methods and rationale for ageing sockeye salmon, mark-recapture sampling techniques and theory, salmon life history, lake ecology, and limnology sampling techniques. Crew members will also have an opportunity to learn or enhance computer skills and work with digital video technology. In addition, all Angoon Cooperative Association, ADFG, and USFS field staff will receive safety training including wilderness first aid and CPR, wilderness survival, safety around bears, water and boating safety, safe travel in aircraft, and remote radio and phone communications. All pre-season and on-the-job training serves to promote safety in the field, enhance the job skills of seasonal workers, and contribute to interest in and capacity for fisheries research in rural subsistence communities.

JUSTIFICATION

This is a solid proposal that ranks as *High* in most evaluation criteria. This proposal is technically sound and administratively competent. This system is in close proximity to significant commercial fisheries, the potential for significant competing harvest is high, subsistence exploitation is high, and there is evidence of very low escapements that could limit future returns. Subsistence fishing at Kanalku has been significantly reduced, either by voluntary or agency restrictions. During 2006, unspent funds are being utilized to construct a weir, and USDA FS is conducting a radio tagging experiment to estimate spawner distribution. The results of this study will provide the basis to site the weir either below the falls or the lake outlet, and the investigation plan addresses both of these contingencies. The investigators addressed all Technical Review Committee review comments with this proposal to assess escapement and terminal subsistence harvest. At question for the future is how continued assessment data will be utilized by ADFG to assess the adequacy of escapements. As originally conceived by the investigators, justification for long term assessment of this stock was in large part to provide data to make recommendations for an escapement goal. To achieve this goal, and to reduce costs to the Monitoring Program; the Technical Review Committee recommended that this proposal be further enhanced by assessment of this stock to mixed-stock and close proximity commercial fisheries. While there have been significant improvements in genetics technology, further research will be necessary before assessment of the harvest from this small stock is feasible. Also, there are significant issues with sampling these large commercial fisheries that must be addressed. As an alternative and to address the Technical Review Committee concerns with cost, the investigators have significantly reduced the proposed budgets for this and other projects (see 07-608 and 609). The question of contribution of this stock to mixed-stock commercial fisheries is important to formulate recommendations for an escapement goal, and should be revisited upon advances in stock identification technology.

Project Number: 07-608
Project Title: Klawock Lake Subsistence Sockeye Salmon Stock Assessment
Geographic Region: Southeast
Data Type: Stock Status and Trends
Principal Investigator: Jan Conitz, ADFG, Division of Commercial Fisheries
Co-Investigator(s): Cheryl Griffitt, Klawock Cooperative Association
Jeff Reeves, USDA Forest Service

Cost: 2007: $73,246 **2008:** $75,101 **2009:** $76,303

ISSUE

Over the last two decades, residents of Klawock have expressed concerns about a perceived decline of sockeye salmon returning to the subsistence fishery in Klawock Inlet. A low sockeye escapement in 1983 prompted ADFG to initiate a sockeye fry stocking program in 1986. In 1999, local residence expressed continued concerns to tribal, state, and Federal governments about a perceived decline in subsistence sockeye resources. This motivated community leaders, the private non-profit hatchery, and ADF&G managers to hold a community workshop to devise a long-term plan to increase sockeye production in this lake. Not surprisingly, in 2000, Klawock community leaders also identified sockeye salmon in Klawock Lake as their top research priority to receive Fisheries Resource Monitoring Program funds. The Klawock Lake Sockeye Project began in 2001 and is currently funded through the 2006 season.

Our purpose in proposing three more years of escapement monitoring in Klawock Lake is to establish a reliable escapement benchmark for the proposes of tracking stock trends and allowing comparisons in the future. We expect these benchmarks to be used in the future to determine if the population size is declining, increasing, or fluctuating within normal limits. Additionally, this stream-specific benchmark should be used in the future as baseline information for stream restoration work.

Both Federal and State governments have regulations pertaining to the Klawock Lake area. Klawock Lake is recognized as a Federal subsistence area under "customary and traditional uses" for residents of the city of Klawock and portions of the watershed are in the Tongass National Forest, a Federal conservation system unit. The Klawock Lake Sockeye Salmon Project meets the Federal jurisdiction criteria for the Fisheries Resource Monitoring Program funding because part of the subsistence fishery occurs under Federal jurisdiction and sockeye salmon returning to this lake system spawn in the Tongass National Forest.

OBJECTIVES

1. Estimate the sockeye spawning population in Half-mile, Three-mile and Inlet streams using mark-recapture methods at the weir so that the estimated coefficient of variation is less than 25% for the sum of the three estimates.
2. In the Klawock Lake sockeye escapement, estimate proportions of fish in each age-sex category, with an estimated coefficient of variation of 10% or less for the two major age classes, and estimate the mean length of fish in each age-sex category with an estimated coefficient of variation less than 5%.

METHODS

The spawning population of sockeye salmon in Klawock Lake will be estimated using mark-recapture methods in three spawning streams using an open population estimator. In two previous studies, the estimated escapement into these three streams was very near the whole-lake escapement estimates based on weir counts. Fish sampled on the spawning grounds will be marked with opercular punches and uniquely-numbered tags. At the end of the season, an individual capture history will be constructed for each fish sampled, showing all sampling events in which that fish was caught. A Jolly-Seber model, with an appropriate modification for spawning salmon populations, will be used to estimate the total spawning population in Klawock Lake. Length, sex, and scale samples will be collected from 600 adult sockeye salmon sampled on the spawning grounds at Klawock Lake to estimate the size and age structure of the population, by sex. Ages will be determined by trained ADFG technicians and the proportion of fish in each age-sex category will be estimated. Crew members will record sex and length of each fish in the field, and pair these data with the scale samples. The average mid-eye-to-fork length of fish in each age-sex category will be estimated.

PARTNERSHIPS/CAPACITY BUILDING

Personnel from ADFG and Klawock Cooperative Association will work closely to ensure the success of the project through training, assistance in the field, and project and budget planning. CPR and First Aid training will continue to be offered annually in Craig. ADFG will offer a pre-season training on the protocols and basic concepts of estimating populations using mark-recapture methods, collecting fish scales, and fish biology. During the field season, the crew will receive additional on-the-job training, and review the concepts and procedures outlined in the pre-season training, acquire hands-on experience, and learn and practice general safety procedures for boat travel.

JUSTIFICATION

This is a solid proposal that ranks as *High* or *Medium* in all evaluation criteria. This proposal is technically sound and administratively competent. This system is in close proximity to significant commercial fisheries, the potential for significant competing harvest is high, subsistence exploitation is high, and there are significant development issues within the drainage that could limit future returns. The investigators addressed all Technical Review Committee review comments and worked with Fisheries Information Service staff to re-design this project to address the Federal interest of credibly estimating escapement in a more cost-effective manner. As currently designed, this project will provide postseason estimates of escapement. At question for the future is how continued assessment data will be utilized by ADFG to assess the adequacy of escapements. As originally conceived by the investigators, justification for long term assessment of this stock was in large part to provide data to make recommendations for an escapement goal. To achieve this goal, and to reduce costs to the Monitoring Program; the Technical Review Committee recommended that this proposal be further enhanced by assessment of this stock to mixed-stock and close proximity commercial fisheries. While there have been significant improvements in genetics technology, further research will be necessary before assessment of the harvest from this small stock is feasible. Also, there are significant issues with sampling these large commercial fisheries that must be addressed. As an alternative and to largely address the Technical Review Committee concerns with cost, the investigators have significantly reduced the proposed budgets for this and other projects (see 07-607 and 609). The question of contribution of this stock to mixed-stock commercial fisheries is important to formulate recommendations for an escapement goal, and should be revisited upon advances in stock identification technology.

Project Number:	07-609
Project Title:	Falls Lake Subsistence Sockeye Salmon Stock Assessment
Geographic Region:	Southeast
Data Type:	Stock Status and Trends
Principal Investigator:	Jan Conitz, ADFG Division of Commercial Fisheries
Co-Investigator(s):	Mike Jackson, Organized Village of Kake
Cost: 2007: $87,742	**2008:** $90,310 **2009:** $92,620

ISSUE

Sockeye salmon returning to the marine terminal area at Falls Lake are heavily utilized by Kake residents in an active subsistence fishery occurring in mid-July. In the years 2001–2003, approximately 3,700–8,400 sockeye salmon returned to the Falls Lake marine terminal area, and approximately 30%–70% of these fish were harvested in the subsistence fishery (Conitz and Cartwright 2005). In the same period, approximately 1,100–5,700 sockeye salmon spawned in Falls Lake. Because large proportions of returning sockeye salmon have been harvested in the subsistence fishery, ADFG management biologists closely monitor this fishery, and have made adjustments to the season to distribute the harvest so that not all the fish are taken from the beginning of the run, as was the case in 2001 (Conitz et al. 2002, Conitz and Cartwright 2005). Although subsistence fishing in the Falls Lake outlet stream or other freshwater parts of the system is Federally managed, very little occurs. However, management of the Falls Lake subsistence fishery affects Federally qualified subsistence users in Kake, who may shift their efforts to other Federally managed sockeye systems if sockeye returns or fishing opportunities are limited at Falls Lake. Because of the need for careful monitoring of this sockeye run and the need for active management of its subsistence fishery, we plan to continue the stock assessment program and provide annual estimates of escapement. We propose to estimate the sockeye spawning population in the late summer and fall using a mark-recapture sampling design on the spawning grounds with an open-population estimator. We are confident these methods will provide a sufficiently accurate estimate of annual sockeye escapement, because we have used these methods for the past five years and compared results with a conventional weir count and closed-population mark-recapture estimate. Each year, the spawning population estimate was somewhat less than the weir-based estimate, which could be due to the fact the two methods estimate the population at different times (at the time of spawning vs. as fish enter the lake). Furthermore, given the uncertainty associated with each estimate, they were not substantially different. Falls Lake is recognized as a Federal subsistence area under "customary and traditional uses" for residents of Kake and is located in the South Baranof Island Wilderness Area, a Federal conservation system unit.

OBJECTIVES

1. Estimate the size of the Falls Lake sockeye spawning population on spawning grounds, with estimated coefficient of variation less than 15%.
2. In the Falls Lake sockeye escapement, estimate proportions of fish in each age-sex category with estimated coefficient of variation 10% or less for the two major age classes, and estimate the mean length of fish in each age-sex category with estimated coefficient of variation less than 5%.

METHODS

The spawning population of sockeye salmon in Falls Lake will be estimated using mark-recapture methods on the spawning grounds and an open-population estimator. Fish sampled on the spawning grounds will be marked with opercular punches and uniquely-numbered tags. At the end of the season, an individual capture history will be constructed for each fish sampled, showing all sampling events in which that fish was caught. A Jolly-Seber model, with an appropriate modification for spawning salmon populations, will be used to estimate the total spawning population in Falls Lake. Length, sex, and scale samples will be collected from 600 adult sockeye salmon sampled on the spawning grounds at Falls Lake to estimate the size and age structure of the population, by sex. Ages will be determined by trained ADFG technicians and the proportion of fish in each age-sex category will be estimated. Crew members will record sex and length of each fish in the field, and pair these data with the scale samples. The average mid eye to fork length of fish in each age-sex category will be estimated.

PARTNERSHIPS/CAPACITY BUILDING

The Organized Village of Kake has successfully managed hiring, personnel issues, payroll, budgeting, and procurement of supplies and services over the past five years as a cooperator in fisheries research projects. Organized Village of Kake fisheries technicians will refresh or learn scale, age, and length sampling techniques, methods and rationale for ageing sockeye salmon, mark-recapture sampling techniques and theory, salmon life history, lake ecology, and limnology sampling techniques. Crew members may also have an opportunity to learn or enhance computer skills. In addition, all Organized Village of Kake, ADFG, and USFS field staff will receive safety training including wilderness first aid and CPR, wilderness survival, safety around bears, water and boating safety, safe travel in aircraft, and remote radio and phone communications. All pre-season and on-the-job training serves to promote safety in the field, enhance the job skills of seasonal workers, and contribute to interest in and capacity for fisheries research in rural subsistence communities.

JUSTIFICATION

This is a solid proposal that ranks as *High* or *Medium* in all evaluation criteria. This proposal is technically sound and administratively competent. This system is in close proximity to significant commercial fisheries, the potential for significant competing harvest is high, subsistence exploitation is high, and timing of the subsistence fishery in relation to migratory timing remains an issue. The investigators addressed all Technical Review Committee review comments and worked with Fisheries Information Service staff to re-design this project to address the Federal interest of credibly estimating escapement in a more cost-effective manner. As currently designed, this project will provide post-season estimates of escapement. At question for the future is how continued assessment data will be utilized by ADFG to assess the adequacy of escapements. As originally conceived by the investigators, justification for long term assessment of this stock was in large part to provide data to make recommendations for an escapement goal. To achieve this goal, and to reduce costs to the Monitoring Program; the Technical Reveiw Committee recommended that this proposal be further enhanced by assessment of this stock to mixed-stock and close proximity commercial fisheries. While there have been significant improvements in genetics technology, further research will be necessary before assessment of the harvest from this small stock is feasible. Also, there are significant issues with sampling these large commercial fisheries that must be addressed. As an alternative and to largely address Technical Review Committee concerns with cost, the investigators have significantly reduced the proposed budgets for this and other projects (see 07-607 and 609). The question of contribution of this stock to mixed-stock commercial fisheries is important

to formulate recommendations for an escapement goal, and should be revisited upon advances in stock identification technology.

Project Number:	07-610
Project Title:	Behm Canal Eulachon Genetics
Geographic Region:	Southeast
Data Type:	Stock Status and Trends
Principal Investigator:	Rob Spangler, USDA Forest Service
Co-Investigator(s):	Blair Flannery and John Wenburg, USFWS Conservation Genetics Laboratory Brenda Norcross, University of Alaska Fairbanks

Cost: 2007: $27,866 **2008:** $28,084 **2009:** $0

ISSUE

This project addresses the following Issues and Information Needs identified in the 2006 Request for Proposals under Stock Status and Trends:

- Assessment of Behm Canal eulachon
- Abundance and composition of Unuk River eulachon

In the past three years, the runs of eulachon in tributaries to Behm Canal (Unuk, Klahini and Eulachon rivers) have been extremely low, raising conservation concerns. In 2005 and 2006, nearly total run failures resulted in no subsistence or personal use harvest in these rivers.

In Alaska, eulachon are considered to be an important subsistence and personal use fishery. In Canada and the lower contiguous U.S., run strength of eulachon populations and spawning distributions between and within rivers can vary dramatically. This variability has been observed in Alaska as well, making management of these populations difficult.

Population discreteness for eulachon within and among river systems in Alaska and Behm Canal is unknown. In fact, very little information exists on eulachon in general. Initial, pilot genetic studies focused on eulachon from British Columbia and Washington observed little population structure, suggesting that eulachon exist as large metapopulations with low levels of genetic diversity. However, a more recent and thorough study of eulachon from this area found that eulachon exhibit much higher levels of genetic diversity than originally thought with significant differences occurring among eulachon from different inlets areas. These contradictory results further complicate management. It is clear that an understanding of eulachon genetic population structure is necessary to identify appropriate management units for maintenance of biodiversity and productivity. In this study, we propose to investigate the population discreteness of eulachon across Alaska, building off previous work.

OBJECTIVES

Evaluate patterns of genetic diversity within and among the three eulachon populations in Behm Canal and compare with the other fifteen eulachon populations distributed throughout Southeast Alaska and with seven populations from Southcentral Alaska.

METHODS

Archived tissues from 25 putative eulachon populations (N=1250) will be genotyped at 14 microsatellite loci. Each population will be analyzed for Hardy Weinburg and gametic phase equilibrium to test whether they represent randomly mating, Mendelian populations. Estimates of allelic richness, percentage polymorphic loci, and observed and expected heterozygosity will be calculated to assess the intrapopulation genetic diversity whereas spatial and hierarchical analyses will be conducted to assess the population structure or the interpopulation genetic diversity.

PARTNERSHIPS/CAPACITY BUILDING

This project is a partnership among the USFS, USFWS, and University of Alaska Fairbanks will provide the basis for future partnerships among these agencies.

JUSTIFICATION

This proposal addresses an important conservation issue for the Federal subsistence program in southeast. Of particular concern is estimation of spawning abundance; however, little is known about the population dynamics of this species including stock structure. This proposal is technically sound and administratively competent. Samples are already collected, archived, and prepared for analysis; which makes for a very cost-effective study. The requested funding is very low and entirely for lab costs. This proposal is of lower priority than those for sockeye salmon assessment; however, some investment on the part of the Monitoring Program to assess stock structure is appropriate.

Project Number: 07-651
Project Title: Customary and Traditional Sockeye Systems of the K'iis Xaadas (Hydaburg Haida)
Geographic Region: Southeast
Data Type: Harvest Monitoring/Traditional Ecological Knowledge
Principal Investigator: Anthony Christianson, Hydaburg Cooperative Association
Co-Investigator(s): Steve Langdon, University of Alaska Anchorage
Cost: 2007: $94,903 **2008:** $38,672 **2009:** $0

ISSUE

Sockeye salmon are critical subsistence resource for the K`iis Xaadas (Hydaburg Haida). In recent years, sockeye returns to the streams customarily and traditionally utilized by K`iis Xaadas have declined significantly, and in some cases runs have disappeared, but reasons for the declines are not well understood by biologists. Through documenting the traditional knowledge of a local elder, longtime customary and traditional user, and observer of sockeye, this project will capture a wealth of information regarding sockeye salmon abundance, run timing, location, and biological characteristics/parameters of run. In addition, this project will also document customary and traditional practices with regard to harvesting and managing sockeye salmon. This information can then be used by biologists to gain an improved understanding of local sockeye salmon populations and factors that may influence sockeye salmon population viability.

OBJECTIVES

The objective of this project is to document the wealth of knowledge pertaining to sockeye salmon abundance, run timing, locations, and biological characteristics held by a key elder, customary and traditional user and long time observer of sockeye salmon. This information will then be corroborated and supplemented with additional key informant interviews with three other elders who hold critical traditional knowledge. The key informant interviews will focus specifically on various aspects of sockeye salmon ecology, biology, and customary and tradition use, including:

- Species utilized and their local names.
- Biological Information including habitat preference, spawning and rearing areas, and seasonal movements.
- Traditional and contemporary harvest methods, including timing of harvest, gear used, and mapping of harvest areas.
- Traditional and contemporary preparation and preservation methods.
- Fish related place names.

This information will then be assessed for coverage by geographic area and topic.

METHODS

Methods will include ethnographic and historical document review, ADFG data acquisition and summary, participant observation, formal interviewing of elders/experts (video and audio recordings), on-site

field investigations (digital video, image and audio recording, GPS recording) with elder/experts and community planning meetings. The information gathering will be achieved through the implementation of a number of tasks, which include, in order of their occurrence: 1) Documentation of K`iis Xaadas Sockeye Salmon TEK; 2) On-site field investigations of sockeye salmon systems; 3) Identification of sockeye salmon stream characteristics; 4) Develop GIS data base; 5) Sustainability Planning

PARTNERSHIP/CAPACITY BUILDING

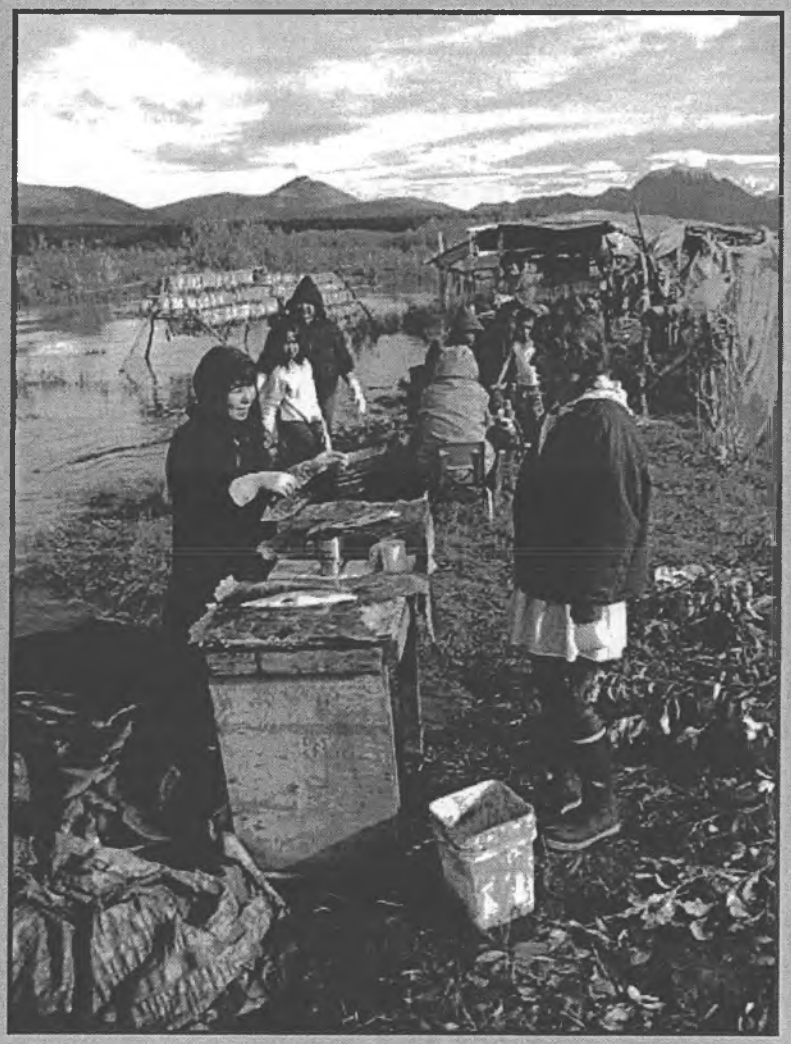
The tribe and consultant will identify key local elders/experts to participate in the research. The consultant's experience in conducting TEK studies, both interviewing and on-site observational methods will be transferred to Hydaburg Cooperative Association personnel. Special efforts will be taken to hire young adults and students to assist in the research so that they can obtain information, research techniques and skills in problem identification and solution.

JUSTIFICATION

This investigation plan addresses several issues identified as being of high priority, in an area with considerable Federal jurisdiction. The Southeast Regional Advisory Council is very interested in attaining TEK to be used in management, and this project will likely be a model for such an approach. The study design, which primarily focuses on collecting and synthesizing TEK regarding sockeye salmon ecology, biology, and cultural use patterns, is clearly laid out and technically sound. Project investigators are experienced in successfully implementing Monitoring Program projects, and together they are a solid partnership with high potential for capacity building.

2006

FISHERIES RESOURCE MONITORING PLAN



FEDERAL SUBSISTENCE MANAGEMENT

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INTRODUCTION

Background

Since 1999, under the authority of Title VIII of ANILCA, the Federal government has assumed management responsibility for subsistence fisheries on Federal public lands in Alaska. Expanded subsistence fisheries management has imposed substantial new informational needs for the Federal system.

Section 812 of ANILCA directs the Departments of Interior and Agriculture, cooperating with the State of Alaska and other Federal agencies, to research fish and wildlife and subsistence uses on Federal public lands. To increase the quantity and quality of information available for management of subsistence fisheries, the Fisheries Resource Monitoring Program was created within the Office of Subsistence Management. The Monitoring Program was envisioned as a collaborative inter-agency, inter-disciplinary approach to enhance existing fisheries research, and effectively communicate information needed for subsistence fisheries management on Federal public lands.

> **The mission of the Monitoring Program is to identify and provide information needed to sustain subsistence fisheries on Federal public lands, for rural Alaskans, through a multidisciplinary, collaborative program.**

To implement the Monitoring Program, five Federal agencies (U.S. Fish and Wildlife Service, Bureau of Land Management, National Park Service, Bureau of Indian Affairs, and USDA Forest Service) work with the Alaska Department of Fish and Game, Regional Advisory Councils, Alaska Native organizations, and other organizations to identify research priorities and select projects to meet information needs.

Monitoring Plan Development

Based on identified research priorities, an annual request for proposals is made. An inter-agnecy Technical Review Committee evaluates all proposals and selects the ones that should be developed into investigation plans. The Technical Review Committee is composed of representatives from each of the five Federal agencies and three representatives from the Alaska Department of Fish and Game. It is chaired by the Chief of Fisheries Information Services and supported by Fisheries Information Services staff. The Technical Review Committee reviews the investigation plans and recommends which ones should be included in the annual monitoring plan. Public review of the draft monitoring plan occurs at the Regional Advisory Council meetings where the Councils' recommendations on the plan are made. An inter-agency Staff Committee reviews all recommendations and attempts to reconcile any differences between the recommendations of the Technical Review Committee and the Councils.

Project Evaluation

Four factors are applied to the evaluation and selection of studies:

1. Strategic Priorities

To be considered for funding under the Monitoring Program, there must be, at a minimum, a Federal nexus, or interest. Studies must have a direct association to a subsistence fishery, and either the subsistence fishery or fish stocks in question must occur in waters within or adjacent to Federal public

lands. Studies that can establish a Federal nexus are then further evaluated for strategic importance within the region in question by assessing:

- **Conservation Mandate** – Risk to the conservation of species and populations that support subsistence fisheries and risk to conservation unit purposes.
- **Allocation Priority** – Risk of failure to provide a priority to subsistence uses and risk that subsistence harvest needs will not be met.
- **Data Gaps** – Amount of information available to support subsistence management. A higher priority is given where a lack of information exists.
- **Role of Resource** – Importance of a species to a subsistence harvest (e.g. number of subsistence users affected, quantity of subsistence harvest), and qualitative significance (e.g. cultural value, unique seasonal role).
- **Local Concern** – Level of user concern over subsistence harvests (e.g. allocation, competing uses, changes in fish size)

2. Technical-Scientific Merit

Technical quality of the study design must meet accepted standards for information collection, compilation, analysis, and reporting. Studies must have clear objectives, appropriate sampling design and methods, correct analytical procedures, and specified progress and final reports.

3. Past Performance-Administrative Expertise

Investigators and their organizations must have demonstrated technical and administrative expertise to complete prior studies, or have co-investigators or appropriate partnerships with other organizations to meet all requirements of the study.

4. Partnership-Capacity Building

Studies must include appropriate partners and contribute to the capacities of rural organizations, local communities, and residents to participate in fisheries resource management. Investigators must have completed appropriate consultation about their study with local villages and communities in the area where the study is to be conducted. Investigators and their organizations should be able to demonstrate the ability to maintain effective local relationships and a commitment to capacity building.

In addition to consideration of the evaluation criteria as explained above, the Technical Review Committee was mindful of limited funding for 2007 when approximately $1 million will be reallocated to the Partners for Fisheries Monitoring Program. Funding for the Partners Program was always envisioned as a Department of Interior cost under the Monitoring Program; however, the Office of Subsistence Management had been able to utilize other funds to cover these costs. In 2007, the Monitoring Program will be responsible for the full cost of the Partners Program, approximately $1 million. As a result, the Technical Review Committee carefully considered the need to initiate new studies with 2006 funds, and strongly recommends utilizing some of the 2006 funds to increase the available funding in 2007.

Policy and Funding Guidelines

Several policies have been developed to aid in implementing funding.

- Studies must be non-duplicative with existing projects.
- A majority of Monitoring Program funding is dedicated to non-Federal sources.

- Activities not eligible for funding under the Monitoring Program include: a) habitat protection, restoration, and enhancement; b) hatchery propagation, restoration, enhancement, and supplementation; and c) contaminant assessment, evaluation, and monitoring. These activities would most appropriately be addressed by the land management agencies.
- Proposals may be funded for up to three years duration.

Finances and Guideline Model for Funding

The Monitoring Program was first implemented in 2000, with an initial investment of $5 million. Since 2001, a total of $6.25 million is annually allocated for the Monitoring Program. The Department of Interior, through the U.S. Fish and Wildlife Service, annually provides $4.25 million. The Department of Agriculture, through the USDA Forest Service, annually provides $2 million. On an annual basis, this budget funds the continuation of existing studies (year 2 or 3 of multi-year projects), and new study starts. Budget guidelines are established by geographic region and data type, and for 2006, $1.25 million is available for new starts (Table 1). Proposals are solicited according to the following two data types:

1. Stock Status and Trends Studies (SST)

These projects address abundance, composition, timing, behavior, or status of fish populations that sustain subsistence fisheries with nexus to Federal public lands. The budget guideline for this category is two-thirds of available funding.

2. Harvest Monitoring and Traditional Ecological Knowledge (HM-TEK)

These projects address assessment of subsistence fisheries including quantification of harvest and effort and description and assessment of fishing and use patterns. The budget guideline for this category is one-third of available funding.

Table 1. Budget guidelines by region and data type for the 2006 Monitoring Program.

	$ Values in 1,000's					$ Values in 1,000's		
	Dept of the Interior		**Dept of Agriculture**					
Region	%	$	%	$	%	Total	SST	TEK
Northern	17.0%	$187			15.0%	$187	$125	$62
Yukon	29.0%	$319			25.5%	$319	$213	$106
Kuskokwim	29.0%	$319			25.5%	$319	$213	$106
Southwest	15.0%	$165			13.2%	$165	$110	$55
Southcentral	5.0%	$55	32.5%	$48	8.3%	$103	$69	$34
Southeast	0.0%	$0	62.5%	$93	7.5%	$93	$62	$31
Inter-regional	5.0%	$55	5.0%	$7	5.0%	$63	$42	$21
TOTALS	100.0%	**$1,101**	100.0%	**$149**	100.0%	$1,250	$833	$417

2006 Fisheries Resource Monitoring Plan

A request for proposals was issued in November, 2004. Fifty-six proposals ($4.4 million) were received in February 2005. These proposals were reviewed by Fisheries Information Services staff and the Technical Review Committee. Of the 56 proposals submitted, the Technical Review Committee recommended 25 proposals ($1.7 million) for further consideration. In March 2005, a request for investigation plans for these proposals was issued by the Technical Review Committee. Twenty investigation plans ($1.4 million) were received in June 2005. The Technical Review Committee recommended funding for 15 of these projects totaling $1.1 million. Regional Advisory Councils agreed with 18 of the 20 Technical Review Committee recommendations. The two projects there was disagreement on were: 06-101 Pikmiktalik River Chum and Coho Salmon Enumeration and Sampling; and 06-304 Seasonal Distribution and Abundance of Rainbow Trout, Aniak River.

The Federal Subsistence Board reviewed the draft monitoring plan in January 2006 and selected 15 projects for inclusion in the 2006 Fisheries Resource Monitoring Plan. With this plan, 45% of the funding will go to Alaska Native organizations, 31% to State agencies, and 24% to Federal agencies (Figure 1).

Tables summarizing the 2006 Subsistence Fisheries Monitoring Plan are provided on pages 5–8. Descriptions of the projects included in the plan can be found on pages 9–40.

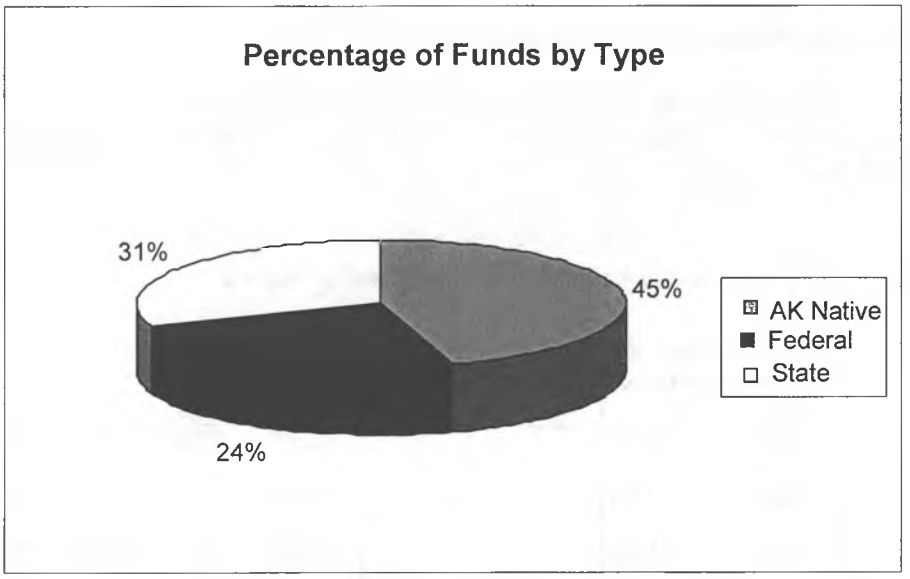


Figure 1. Percent of 2006 funding distributed to Alaska Native, Federal, State, and other organizations.

Number of projects funded for the 2006 Fisheries Resource Monitoring Plan. Project type includes stock status and trends (SST) and harvest monitoring and traditional ecological knowledge (HM-TEK).

Geographic Region	SST	HM-TEK	Total
Northern Alaska	2	0	2
Yukon	1	2	3
Kuskokwim	4	1	5
Southwest Alaska	0	0	0
Southcentral Alaska	1	0	1
Southeast Alaska	2	1	3
Inter-regional	1	0	1
Total	11	4	15

Cost of projects funded for the 2006 Fisheries Resource Monitoring Plan. Project type includes stock status and trends (SST) and harvest monitoring and traditional ecological knowledge (HM-TEK).

	Cost ($000)		
Geographic Region	SST	HM-TEK	Total
Northern Alaska	$167	$0	$167
Yukon	$92	$174	$267
Kuskokwim	$280	$86	$366
Southwest Alaska	$0	$0	$0
Southcentral Alaska	$91	$0	$91
Southeast Alaska	$79	$84	$163
Inter-Regional	$49	$0	$49
Total	$759	$344	$1,103

Summary Tables

Northern Alaska stock status and trends projects funded in 2006.

Study #	Title	Approved Budget 2006	2007	2008
06-101	Pikmiktalik River Chum and Coho Salmon Enumeration and Sampling	$140.5	$142.5	$0.0
06-108	Aerial Monitoring of Kongakut, Anaktuvuk, Ivishak Rivers Dolly Varden Overwintering Abundance	$26.8	$27.3	$27.7
	Total	$167.3	$169.8	$27.7

Yukon River region stock status and trends project funded in 2006.

Study #	Title	Approved Budget 2006	2007	2008
06-205	Application of Mixed-stock Analysis to Estimate Stock Composition Fall Chum Salmon, Yukon River	$92.2	$89.2	$92.2
	Total	$92.2	$89.2	$92.2

Yukon River region harvest monitoring and traditional ecological knowledge projects funded in 2006.

Study #	Title	Approved Budget 2006	2007	2008
06-252	TEK and Biological Sampling of Non-salmon Fish Species, Yukon R	$97.6	$77.7	$33.6
06-253	TEK and Harvest Survey of Non-salmon Fish, Middle Yukon R	$76.8	$53.7	$20.1
	Total	$174.4	$131.4	$53.7

Kuskokwim River region stock status and trends projects funded in 2006.

Study #	Title	Approved Budget 2006	2007	2008
06-303	Migratory Behavior of Broad and Humpback Whitefish, Kuskokwim River	$162.7	$173.1	$172.1
06-305	Spawning Distribution and Migratory Timing of Inconnu, Kuskokwim R	$52.3	$118.6	$43.3
06-306	Inseason Subsistence Salmon Catch Monitoring, Kuskokwim R	$33.9	$36.0	$40.0
06-307	Inseason Support for Cooperative Management of Subsistence Fishery, Kuskokwim River	$31.0	$32.3	$33.6
	Total	$279.9	$360.0	$289.0

Kuskokwim River region harvest monitoring and traditional ecological knowledge project funded in 2006.

Study #	Title	Approved Budget 2006	2007	2008
06-351	Non-salmon Harvest Surveys and Local Knowledge Project, Lower Kuskokwim River	$86.1	$91.8	$0.0
	Total	$86.1	$91.8	$0.0

Southcentral Alaska stock status and trends project funded in 2006.

Study #	Title	Approved Budget 2006	2007	2008
06-502	Estimate Inriver Abundance of Sockeye Salmon, Copper River	$90.9	$0.0	$0.0
	Total	$90.9	$0.0	$0.0

Southeast Alaska stock status and trends projects funded in 2006.

Study #	Title	Approved Budget 2006	2007	2008
06-601	Sockeye Salmon Stock Assessment, Neva Lake	$28.1	$29.0	$32.0
06-602	Subsistence Sockeye Salmon Stock Assessment Kutlaku Lake	$51.0	$0.0	$0.0
	Total	$79.1	$29.0	$32.0

Southeast Alaska harvest monitoring and traditional ecological knowledge project funded in 2006.

Study #	Title	Approved Budget 2006	2007	2008
06-651	Survey of Customary Trade in Seafood Products, Southeast AK	$83.7	$222.6	$108.6
	Total	$83.7	$222.6	$108.6

Interregional Alaska stock status and trends project funded in 2006.

Study #	Title	Approved Budget 2006	2007	2008
06-701	Dolly Varden Stock Composition in Subsistence Fisheries, Southwest AK	$49.4	$47.5	$0.0
	Total	$49.4	$47.5	$0.0

06-101
Pikmiktalik River Chum Salmon Enumeration and Sampling

Geographic Area: Northern Region

Information Type: Stock Status and Trends

Principal Investigator: Karen Dunmall
Kawerak Incorporated
Nome, AK
Phone: (907) 443-4384 Fax: 443-4461
Email: fish.bio@kawerak.org

Co-Investigator: Timothy Kroeker, Kawerak Incorporated
Natural Resources Division

Cost:	2006	2007	2008
	$ 140,514	$142,499	$145,981

Issue

Much of the subsistence harvest of the communities of Stebbins and St. Michael is conducted on the salmon stocks of the Pikmiktalik River, which is in their customary and traditional use area. This customary and traditional use area also includes the Kogok and Kuiak Rivers. However, in-season management of these rivers has been based on escapement information from other systems, more specifically, August fall chum runs on the Yukon River dictate whether Pikmiktalik, Kogok and Kuiak Rivers will be open for the coho run. The availability of escapement information has improved management of these fishery resources by giving Federal managers inseason escapement of the Pikmiktalik River, independent of Yukon River salmon runs and creates an index of the Pikmiktalik River for the Kogok, Kuiak and Pastolik Rivers.

Objectives

This project is proposed as a three-year (2006, 2007, 2008) study with the following objectives:

- Install tower, weir and flash panel at the counting site.
- Provide daily and total annual estimates of chum and coho salmon passing the counting site.
- Provide estimates of the age, sex, and size composition of chum and coho salmon passing the counting site.
- Record weather and water conditions at the salmon counting site.

Methods

Counting apparatus will consist of one 15-foot high scaffold tower, a partial diversion weir to direct fish towards the tower, and a vinyl flash panel on the river substrate to provide contrast. Counts will be made of salmon passage by species for a 20-minute duration each hour. Salmon will be visually identified and counted on a hand tally counter. Salmon passing upstream will be included in the total count, while salmon passing downstream will be subtracted from the total count. The total number of salmon passing the site will be estimated by multiplying each hourly count by three. The 20-minute counting schedule

will occur 24 hours a day, 7 days per week. Daily counts will be transmitted by radio or telephone to National Park Service and Alaska Department of Fish and Game offices for use in fishery management decisions.

Chum and coho salmon will be captured at or near the counting site with a beach seine to collect age, sex, and length information. A stratified sampling design, based on run timing characteristics, will be followed in which approximately 218 chum will be sampled within each stratum. As well, 160 coho salmon will be sampled throughout the coho salmon return. This sample size was selected so that simultaneous 95% confidence interval estimates of age composition proportions would be no wider than 0.20, and includes a 9% adjustment in sample size to account for unreadable scales. Efforts will also be made to sample salmon caught in the subsistence fishery to obtain information on the species, age, sex, and length composition of the harvest.

Partnerships/Capacity Building

The Norton Sound Regional Advisory Council, Stebbins Community Association, and Stebbins Native Association strongly support this project to improve management of local salmon stocks. This project would continue to develop capacity within the communities of Stebbins and St. Michael to actively participate in stock assessment and provide employment for local residents. Some residents already have experience in conducting salmon surveys through work funded by the Native American Rights Fund in 1995, and through the Pikmiktalik River salmon enumeration project, funded by the Office of Subsistence Management, for the 2003 – 2005 seasons. Residents also have much traditional knowledge about this river system.

06-108
Aerial Monitoring of Dolly Varden overwintering abundance in the Anaktuvuk, Ivishak, Canning, Hulahula, and Kongakut rivers.

Geographic Area: Northern Region

Information Type: Stock Status and Trends

Principle Investigators: Tim Viavant and John Burr
ADFG, Sport Fish Division
Fairbanks, AK
Phone: (907) 459-7220
Email: tim_viavant@fishgame.state.ak.us

Co-Investigator: Mitch Osbourne, USFWS, Fairbanks Fish and Wildlife Field Office

Cost:	2006	2007	2008
	$ 26,794	$ 27,252	27,697

Issue

This proposed study will address the Arctic/Kotzebue/Norton Sound Region Subsistence Fisheries Monitoring Issues, Stock Status and Trends #1: Distribution, abundance, and life history of fish species; subheading: Char stock structure as identified in the November 2003 Office of Subsistence Management document: Issues and Information Needs - Federal Subsistence Fisheries.

Objectives

The objective of the project for each of the 3 years is to conduct a single aerial index count of the mid-September overwintering abundance of Dolly Varden within established index areas in the Anaktuvuk, Ivishak, Canning, Hulahula, and Kongakut rivers.

Methods

In all drainages, surveys will be conducted in established index areas, from a helicopter, by two experienced observers. All surveys will be conducted between September 10 – 25. During all surveys, a third observer will participate in the survey, and conduct a count on their side of the helicopter for comparison with an experienced observer.

Surveys of the Ivishak, Anaktuvuk, and Kongakut rivers will be conducted within the boundaries of the index areas established during previous aerial index counts. Surveys of other drainages will be conducted each year within boundaries of index areas established during the first year of the project. These index areas will be established based on the distribution of fish during the initial survey of the drainage combined with local knowledge of fish distribution within the drainage. Local knowledge of fish distribution within drainages will be solicited from subsistence users in cooperation with the North

Slope Regional Advisory Council, the Arctic National Wildlife Refuge and North Slope Borough Wildlife Department. Boundaries of index areas will be recorded as GPS waypoints.

Partnerships/Capacity Building

The North Slope Borough Wildlife Department has agreed to provide an observer to accompany project biologists during some or all of the surveys conducted in order to familiarize a staff member in the techniques used for conducting these surveys. It is the intent of this project to train and familiarize staff of a local organization (local government agency, village or regional corporation, or tribal organization) with this survey methodology, so that a local organization would have the capacity to continue stock monitoring into the future.

06-205
Application of mixed-stock analysis for Yukon River fall chum salmon

Geographic Area: Yukon River

Information Type: Stock Status and Trends

Principle Investigators: Blair Flannery and John Wenburg
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Cost:	2006	2007	2008
	$92,200	$89,200	$92,200

Issue

This project relates to the following priority information need identified in the 2006 Office of Subsistence Management Request for Proposals:

- Inseason mainstem stock assessment and mixed-stock analysis of Lower Yukon River salmon

This investigation plan is a continuation of FIS 04-228, which provided stock composition estimates of chum salmon to Federal subsistence managers within 24 to 48 hours of receiving samples from Pilot Station sonar test fisheries. Yukon River chum salmon move through numerous Federal holdings during their spawning migration. Chum salmon in the Yukon River continue a general trend of below average to poor returns. The recent five year (1998-2003) average return was half the previous ten year average and the persistent return shortage has necessitated the continued listing of Yukon River fall chum salmon as a stock of yield concern. The disparate strength of individual stocks, coupled with the overall run shortage and a reduction in subsistence opportunities, makes it clear that individual stock return data would facilitate improved management. The USFWS management team responsible for subsistence management has requested that this work be continued. In this project, we will provide estimates of stock compositions for major fall chum salmon stock groups to continue to facilitate Yukon River chum salmon management.

Objective

Estimate regional stock contributions and run timing from Pilot Station sonar test fishery harvests.

Methods

Genetic samples will be collected from every chum salmon caught in the Pilot Station sonar test fishery from June 27 – August 31, and sent to the Conservation Genetics Laboratory every third day and at the conclusion of each run pulse. Samples will be stratified by pulse and a subsample of size 200, selected so that daily sample size is proportional to the daily sonar passage estimate within a stratum, will be genotyped for each pulse of the fall run. Stock abundance estimates will be derived by combining the sonar passage estimates with the stock composition estimates. To evaluate the concordance of various data sources, a post season analysis will be conducted to compare these stock specific abundance

estimates against escapement and harvest estimates, which should prove useful for assessing the study design of this and other enumeration projects.

Partnerships/Capacity Building

This project will work with ADFG AYK biologists to coordinate sample collection from the Pilot Station sonar test fishery. A contract with the Association of Village Council Presidents will be established to hire a local to collect genetic samples. Baseline development was completed in partnership with DFOC. This project will consult, collaborate and coordinate with state, Federal and DFOC managers.

06-252
Traditional Ecological Knowledge and Biological Sampling of Non-salmon Fish Species in the Yukon Flats Region

Geographic Area: Yukon Region

Information Type: Harvest monitoring/traditional ecological knowledge (HM/TEK)

Principal Investigator: Mike Koskey, PhD.
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Co-Investigators: Ingrid S. McSweeny, Bureau of Land Management
Wennona Brown, Yukon Flats, Kanuti, and Arctic NWRs
Bruce Thomas, Council of Athabascan Tribal Governments
Caroline Brown, ADFG, Subsistence Division

Cost:	2006	2007	2008
	$97,611	$77,705	$33,641

Issue

This project is designed to expand the available subsistence harvest information for non-salmon fish species in the Yukon Flats region and collect baseline biological information on northern pike in Birch Creek. The subsistence harvest regulations for the Birch Creek drainage have changed considerably over the past three decades, yet there is currently very little reliable qualitative or quantitative baseline information on resident fish species in drainage. At the 2003 Tri-Regional Advisory Council meeting in Wasilla, there was concern over this lack of information on the harvest levels and fish populations of non-salmon species in Birch Creek in light of recent proposals to the Federal Subsistence Board and the Alaska Board of Fisheries addressing current subsistence opportunity for non-salmon harvests. As such, this research seeks to document traditional ecological knowledge about non-salmon fish species held by area residents and describe the characteristics of the annual non-salmon subsistence harvest. Baseline biological data will be collected under a separate cost-share agreement submitted by the Bureau of Land Management (BLM), but will be briefly described in this proposal to provide the full context of the proposed research.

Objectives

1. Document Traditional Ecological Knowledge of non-salmon fish species in the Birch Creek area for the communities of Ft. Yukon, Circle, Central, Beaver and Birch Creek Village, as reported by local experts;
2. Estimate harvest levels and use patterns of non-salmon fish species by village residents through a door-to-door harvest survey;

3. Collect baseline biological information to estimate age, sex, and length (ASL) composition of northern pike populations from upper and lower Birch Creek and monitor water quality parameters important to northern pike (under separate funding).

Methods

This research focuses on the resource use patterns by residents of Fort Yukon, Circle, Central, Beaver and Birch Creek Village, involving the Yukon River, Beaver Creek, Hodzana River, the Little Black River, Sheenjek River, and with a special focus on Birch Creek.

The project relies on semi-structured ethnographic interviews with elders and other knowledgeable fishers, mapping, linguistic and place-name analysis, and participant-observation in order to address the first objective. Researchers will attempt to interview approximately 4-5 key respondents in each community, on an individual basis as well as in small groups or with married couples for a total of approximately 25 interviews. Interviews will include topics such as traditional and contemporary harvest patterns and techniques, different preservation and use practices, and local knowledge regarding broad ecological factors such as run timing, seasonal movements, habitat, and fish health/disease. Additionally, information will be collected where available on historic self-management techniques and the resulting effects on fish populations.

The second objective is addressed through the implementation of a door-to-door harvest survey in each community conducted by a local research assistant. To maximize the accuracy of the household survey, a census method of surveying will be used in each community with the exception of Ft. Yukon, where a random 50% sample of the community will be surveyed. Surveys are one page instruments and will include questions about species and amounts utilized, gear types, harvest timing, basic demographic information, and initial social networking patterns (patterns of sharing and distribution within communities).

The final objective is addressed through a pilot survey estimating size, age composition, and growth of northern pike inhabiting Birch Creek. The funding for the biological component of this project (Objective 3) is addressed under a separate challenge cost-share agreement, but a brief description of it is included here to demonstrate the scope of the entire project. The goal of this baseline study is to assess and compare the composition and growth of northern pike populations and environmental parameters from reaches in upper and lower Birch Creek. Specific component objectives include estimating the age, sex and length (ASL) composition of northern pike in Birch Creek; estimating the weight of northern pike in Birch Creek; determining and comparing growth rates and of northern pike populations from upper and lower Birch Creek; and measuring and comparing environmental factors important to northern pike from upper and lower Birch Creek.

This project is designed to build capacity between ADFG, FWS, BLM, and CATG by fostering interdisciplinary research opportunities. The project will begin in April 2006 to allow preparation time for the first biological field season in summer 2006 and Analysis and write-up of biological data, TEK, and harvest survey will be completed by August 2008 for review and final deadline of September 30, 2008.

Partnerships/Capacity Building

One of the primary strengths of this project is the cooperation of four organizations representing two Federal agencies, one State agency and one Alaska Native organization. CATG staff will work in collaboration with tribal councils, BLM, USFWS, and ADFG Division of Subsistence in designing survey instruments (modeled on existing projects), identifying and training local technicians for survey

work, ethnographic interviewing, and biological sampling. As designed, this project relies on information provided by local experts. Further, this project relies on collaboration with, and the participation of, local people, both in terms of identifying and working with local experts, and also in terms of recording and preparing TEK and harvest data. Local residents will also be hired and trained to assist with the biological sampling component. USFWS, CATG, ADFG, and BLM researchers will cooperate in completing the TEK work, with ADFG leading the interviews and CATG organizing mapping sessions. Principal investigators will encourage local participation in Federal or State regulatory meetings (AC, RAC, BOF, and FSB) to express their concerns about Birch Creek subsistence resources, especially in light of any potential research findings. Partners will work cooperatively to screen and analyze the data, and the final report will be written collaboratively by all partners.

06-253
Traditional Ecological Knowledge and Harvest Survey of Non-Salmon Fish in the Middle Yukon River Region.

Geographic Area: Middle Yukon River area: Ruby, Tanana, Galena, Kaltag, and Nulato

Information Type: Harvest monitoring/traditional ecological knowledge (HM/TEK)

Principal Investigator: Caroline Brown
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Co-Investigators: Ms. TygJules SkyWatcher, Louden Tribal Council
Mike Koskey, PhD., ADFG, Division of Subsistence

Cost:	2006	2007	2008
	$76,819	$53,716	$20,125

Issue

This research proposes to collect Traditional Ecological Knowledge (TEK) and contemporary harvest figures to address local concerns about resident freshwater fish species in the middle Yukon River region, including the impact on subsistence harvesting in light of decreasing salmon stocks and other environmental factors. This project will complement two existing FIS projects (01-100 and 02-037) to present a comprehensive picture of subsistence non-salmon harvests for a significant stretch of the Yukon River and Koyukuk River drainages. The Western and Eastern Interior Regional Advisory Councils identified the need for comprehensive data on fish populations, life histories, and the range of subsistence uses. More specifically, members of the Western Interior Alaska Regional Advisory Council identified middle Yukon villages as a significant area for this research at their October 2004 meeting in Anvik.

This project also addresses the need for more meaningful capacity building on the local level. Coordination between state agencies, tribal councils, and local school officials and high school students is a significant contribution to capacity building. By structuring meaningful participation of a community's youth in an integrated biological and social scientific research project on locally important resources, this study will encourage future interest in the biological and social sciences as potential professional and technical careers.

Objectives

1. Estimate the subsistence harvest and percentage of households using, harvesting, giving away, and receiving resident freshwater fish species (non-salmon) for the calendar year 2007 by species and by season for the five communities along the Middle Yukon.
2. Document local knowledge related to traditional and contemporary patterns of subsistence non-salmon harvest including:
   i) species utilized and local names used with introductory taxonomic analysis

ii) fish ecology, including information about habitat, spawning and seasonal movements
iii) contemporary and traditional methods and timing of harvest
iv) contemporary and traditional methods of preparation and preservation
v) spatial mapping of harvest areas and other significant habitats by species and season
vi) traditional management practices and the effects on fish populations
vii) fish-related place-names

3. Develop guidelines for working with local students on TEK and harvest monitoring projects.

Methods

This research focuses on the resource use patterns by residents of Galena, Ruby, Tanana, Nulato, and Kaltag along the middle portion of the Yukon River and involving the Tozitna, Nowitna, Nulato, Melozitna Rivers and Kalakaket Creek among other waterways.

In the first year of this project, the partners will work with the science/math and social science/english teachers at the participating high schools to design class projects involving ethnographic and harvest survey approaches to data collection on non-salmon fish. Prior to data collection, ADFG and Louden Traditional Council staff will work with teachers to train students on harvest survey methods and interviewing methods. This training will cover topics such as research objectives, designing survey instruments, designing interview questions, focusing interviews, the relationship between research and natural resource management, and practical issues in conducting face-to-face surveys and interviews (equipment, timing, preparedness, ethics, etc.) The partners will design training manuals to assist in these trainings and to be used as references by teachers and students.

Students and local research assistants will work with the partners to collect harvest data through in-person household surveys. The sampling goal will be 100% of each of the participating communities, with the exception of Galena, where a 50% random sample will be conducted because of the community's size. The one-page survey includes questions about ten (10) non-salmon fish species, including five (5) species of whitefish and spaces for additional species not listed on the form but harvested in the area. The form also includes questions about different activities including use, harvest, receiving, and giving away fish to track the sharing patterns characteristic of subsistence activities, as well as a worksheet to document actual harvests by species and month for one calendar year. Finally, the form collects basic demographic information, observations about long-term trends in stock size, and a comment section.

TEK interviews constitute the second component of data collection for this project. These interviews will focus on information regarding local taxonomy, life history/biology information including habitat, spawning, and seasonal movements, traditional/contemporary harvest methods, including harvest timing, gear types used, mapping of harvest areas, and fish-related place names, traditional/contemporary preparation and preservation methods, uses, including human food, dog food, bait, etc., and relative abundance and population trends. Interviews will also attempt to isolate traditional management practices employed by local fishermen and the effects on fish populations. Investigators anticipate interviewing approximately 4-5 individuals in each community for a total of 20-25 total interviews.

Partnerships/Capacity Building

ADFG staff will work collaboratively with tribal councils to design survey instruments, train local students and research assistants for survey work, and in conducting the TEK interviews. As designed, this project relies on collaboration with, and the participation of, local people in several capacities: a.) identifying and working with local non-salmon fish experts; b.) working through the Galena school

to identify high school age students to assist with the harvest survey and TEK work, and c.) working with tribal councils on all aspects of the project. By incorporating school age community members into the research design, data collection, and data analysis, ADFG and LTC hope to increase capacity by exposing kids to potential career fields in fisheries science and the social sciences, instill a sense of community ownership in the process, and to support the process of generational transmission of knowledge. Additionally, students will get first hand experience in research that contributes directly to natural resource management. ADFG will screen and analyze the data, and the final report will be written collaboratively by ADFG and LTC staff.

06-303
Migratory Behavior of Broad and Humpback Whitefish in the Kuskokwim River Watershed.

Geographic Area: Kuskokwim River

Information Type: Stock Status and Trends

Principal Investigator: Ken Harper
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Co-Investigator: David Orabutt
Kuskokwim Native Association

Cost:	2006	2007	2008
	$ 162,693	$173,090	$172,062

Issue

The study of non-salmon species is listed as an important issue for the 2006 Fisheries Resource Monitoring program. Kuskokwim River whitefish are a heavily exploited resource, and comprise a significant year round source of protein for local users. There are little or no regulations governing harvests in the Kuskokwim River. Kuskokwim River residents have noted changes and have reported a decline in size and numbers of humpback and broad whitefish. The lack of biological information on whitefish populations in the Kuskokwim River however prevents the development of sustainable harvest guidelines.

Objectives

1. Locate spawning aggregates of humpback and broad whitefish.
2. Determine migratory timing of mature broad and humpback whitefish to spawning, over wintering, and feeding grounds.
3. Map at least one spawning area (aggregates of one species identified in objective #1) by determining the reach of river for which 90% of the spawning occurs for that aggregate of fish.
4. Estimate the youngest age and age of full recruitment to a spawning ground identified for one species in objective #1.
5. Estimate the size at which all fish are mature.
6. Determine multiple year PIT tag retention through operation of PIT tag interrogation system at the outlet of Whitefish Lake.

Methods

Whitefish will be captured in several tundra rivers and lakes below Bethel using gillnets and seines. Otoliths will be collected for age and microchemistry analysis. Approximately 90 whitefish will be

captured during the spring of 2006, 2007, and 2008 and implanted with radio tags and PIT tags to track movements of individual fish to spawning, wintering and spring feeding areas. An additional 250-500 PIT tags will be implanted in whitefish in the lower Kuskokwim River each year. Movements will be monitored using 7 fixed radio receiver stations located between Bethel and Medfra. Boat and aerial surveys will be conducted below Tuntatuliak to Nicholi, encompassing over 1000 river kilometers. Spawning grounds identified in year one and two will be surveyed in the second and third years to determine area of spawning habitat, and spawner age, length at maturity, sex, and current year spawner composition. Fish sampled on the spawning grounds will be scanned for PIT tags and examined for floy tags. The remote PIT tag interrogator system used at the outlet of Whitefish Lake (FIS 05-301) will be operated to detect multiple year returns of tagged fish to the lake. Spawning grounds will be assessed for deployment of a PIT tag reader.

Partnerships/Capacity Building

This project directly promotes interaction between KNA, USFWS, Coastal Villages and ADFG and supports a positive working relationship between major user groups. We will build upon the partnership and collaboration between the USFWS and KNA, developed over the past four years of whitefish studies. Coastal Villages Development Corp has also been approached for support. The study platform used in this study will be integrated into ADFG's proposed sheefish study. This project has been discussed and supported by the Kuskokwim Fisheries Resource Coalition.

06-305
Spawning Distribution and Migratory Timing of Kuskokwim River Sheefish Using Radiotelemetry.

Geographic Area: Kuskokwim River

Information Type: Stock Status and Trends (SST).

Principal Investigators: Steve Stroka and John Chythlook
ADFG, Division of Sport Fish
Fairbanks, AK
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Cost:	2006	2007	2008
	$ 52,267	$ 118,639	$ 43,323

Issue

Sheefish (inconnu) are a highly migratory, long-lived species and are important to both the Kuskokwim River subsistence and sport fishers. Although these large, piscivorous (fish eating) fish are found throughout the drainage, few specifics are known regarding the location, number, and size of spawning stocks, the timing and extent of seasonal migrations, or areas used for feeding and overwintering. In order to understand the impacts the fisheries have on these stocks, an understanding of these characteristics is needed.

Objectives

This project is being proposed as a three-year (2006-2008) study. The primary goal of the project is to:

1. Document spawning stocks and spawning locations of sheefish in the Kuskokwim River drainage.

Secondary goals of the project are to:

2. determine the migratory timing of mature sheefish to their spawning, overwintering, and feeding areas;
3. identify specific summer feeding areas used by known spawning stocks; and,
4. collect tissue samples from all radio-tagged sheefish for future genetic stock identification analysis.

Methods

This study will provide biological baseline information on spawning aggregations (stocks) of sheefish in the Kuskokwim River which is needed to design future studies to investigate size and maturity, distribution, stock composition of the harvest, and stock abundance, all of which are needed to determine sustainable levels of harvest of inconnu stocks in the Kuskokwim River drainage. The study will be conducted over a 3 year period (2006-2008). The purpose and scope of sampling will differ for each year, as follows.

Sampling in Year 1 (2006) will focus on fish of known spawning status in the upper portion of the drainage. Prespawning sheefish will be caught and radio-tagged from approximately August 22 through September 10. Sheefish will be captured near the village of McGrath as they migrate toward their spawning areas. Approximately 30 prespawning sheefish >750 mm FL will be tagged with long duration (~2 years) radio tags surgically inserted into the fish. Radio-tagged fish will be tracked as they travel to their upriver spawning areas and as they migrate back downriver after spawning to determine timing of travel as well as to identify spawning areas in the upper Kuskokwim River drainage.

The purpose of Year 2 (2007) sampling will be to radio tag fish in the lower portion of the drainage to document any spawning areas that may be present downstream of McGrath. To account for uncertainty in fish distribution and behavior, a two-tiered sampling approach will be used to ensure that both migratory and nonmigratory components of the population are tagged. This will be accomplished by capturing and radio-tagging 30 sheefish in the mainstem Kuskokwim River near Bethel as they move upriver to feeding areas as soon as the river is clear of ice (approximately mid-May), and secondly by capturing and radio-tagging 60 sheefish in summer feeding areas in tributaries between Sleetmute and Bethel. A combination of set and drift gillnets and hook and line gear will be used to capture sheefish. Radio tagged sheefish will be tracked throughout the summer and fall to identify: 1) spawning areas, 2) summer feeding areas, and, 3) timing of the spring and fall migrations.

The purpose of the Year 3 (2008) work will be to continue to track the Year 1 and 2 fish to determine summer feeding and spawning areas. Movements and locations of radio-tagged sheefish in all 3 years of the study will be determined with use of ground-based receiving stations and by aerial tracking.

Partnerships/Capacity Building

The proposed study will be performed in cooperation with the Tanana Chiefs Council (TCC) and Kuskokwim Native Association (KNA). This project directly promotes interaction between TCC, KNA, and ADFG and supports a positive working relationship between major user groups and the primary management agency on the Kuskokwim River. Pete Snow assisted with the preliminary sheefish work in 2004, and is willing to assist with the future capture and tagging of sheefish from his set gillnet site near McGrath. Pete and/ or another local resident(s) will be hired to assist with fishing and tagging operations in Year 1 of the study. A local hire from KNA will be used to assist with fishing and tagging operations in Year 2 of the study. The local hire experience is intended to teach new skills, expose the individual to the field of fisheries biology and encourage local participation in fisheries research projects. This project is supported by the Kuskokwim Fisheries Resource Coalition.

This study is intended to be a cooperative project with proposed Office of Subsistence Management study: 06-303: Telemetry studies of humpback and broad whitefish in the lower Kuskokwim River. This proposed sheefish study will rely on their stationary tracking array on the Kuskokwim River and the two projects will share aerial survey costs.

FIS 06-306
Kuskokwim River Salmon Inseason Subsistence Catch Monitoring

Geographic Area: Kuskokwim River

Information Type: Stock Status and Trends

Principal Investigator: Michael Martz
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Co-Investigators: Greg Roczicka, Orutsararmiut Native Council
Doug Bue, ADFG, Division of Commercial Fisheries

Cost:	2006	2007	2008
	$ 33,873	$ 36,041	$ 39,964

Issue

Inseason information from subsistence salmon fishers in the Bethel area can be used in combination with other information to assess salmon run timing and relative abundance. Together these sources of information assist fishery managers in making decisions to achieve salmon escapement goals, to provide fishers subsistence opportunity to harvest and to provide opportunity for fisheries other than subsistence if enough salmon are available. Additionally, this program provides timely insight into the progress of the subsistence fishery, a relative index of catches based on those interviewed, and very importantly, allows an avenue for local user input into the management process. Inseason interviews of subsistence fishers have been conducted in the Bethel area since 2001. Summaries of this information have contributed to effective management of the fishery. Comparisons of inseason interview responses can be made among weeks, within a year, and among years to help identify gross differences in salmon run timing, abundance, and gain insight into the fishery (gear usage or inseason harvest indices). Summaries of interview responses are presented to the Kuskokwim River Salmon Management Working Group, (hereafter called the Working Group) at each meeting. Fishery managers and the Working Group will utilize these summaries in the decision-making process for the Kuskokwim River subsistence salmon fishery.

Objectives

1. Characterize salmon run timing and relative abundance in May, June, and July through weekly interviews with Bethel Area subsistence salmon fishers.
2. Characterize fishing activity and gear usage through weekly interviews with Bethel Area subsistence salmon fishers in May, June, and July.
3. Build management capacity by providing local input into the management process for the salmon subsistence fishery in May, June, and July through the presentation of weekly summaries of interviews with Bethel Area subsistence salmon fishers at Kuskokwim River Salmon Management Working Group meetings

4. Build local capacity by providing cross training to an Orutsararmiut Native Council technician in other ADFG and USFWS projects for up to two weeks.

Methods

The Kuskokwim River salmon inseason subsistence catch monitoring project relies on voluntary participation of local subsistence fishers. Most participants are life-long residents of the Kuskokwim Area and represent the most experienced and knowledgeable fishers in the Bethel area. Nearly all participants are interviewed at seasonal fishing locations (fish camps) that have been maintained across generations. Most participants are of Alaska Native descent with a long tradition of practicing subsistence as a way of life.

Each year, the project will consist of hiring and training one fisheries technician by the Orutsararmiut Native Council project investigator in consultation with ADFG project investigators to begin field season preparations the third week in May and subsistence catch monitoring interviews three days later. This technician will work in partnership with the Orutsararmiut Native Council technician hired for FIS 05-306. The list of interviewees from the previous year (FIS 05-307) and developed since 2001 will form the initial list for 2006. In 2004, 51 subsistence fishing families were identified at fish camps in the areas of Gweek River, Church Slough, Steamboat Slough, Straight Slough, Old Bethel Airport, Oscarville Slough, Napaskiak Slough, the main Kuskokwim River and Bethel. The goal will be to interview these 51 families supplemented with opportunistic encounters with fishers at the Bethel boat ramp or travel to these areas, during which additional families wishing to participate will be added. Based on the success in past years, the same member of a fish camp is interviewed each week. The technician will travel by boat to outlying fish camps and contact Bethel fishers by phone at home. The technician will conduct interviews beginning Thursday of every subsistence fishing period (Wednesday through Saturday) or week (when fishing seven-days per week) through July 15th with subsistence fishers in Bethel and vicinity fish camps. The interviewer will ask questions in order to complete a two page interview form. Interview question responses will be entered into an Excel spreadsheet and summarized across each calendar or weekly fishing period. Summary tables will be provided to ADFG for distribution to USFWS, Regional Advisory Council members, Working Group members, and the public at Working Group meetings. A brief report will be added to capture fisher's comments and concerns expressed during the interview.

Partnership/Capacity Building

This project will enhance the ability of local individuals and agencies to be involved in obtaining inseason subsistence catch monitoring information. Staff from Orutsararmiut Native Council will conduct this project in consultation with staff from ADFG, Division of Commercial Fisheries. This (2006) will be the sixth year of subsistence interviews and Orutsararmiut Native Council staff responsible for the field work will be trained by the Orutsararmiut Native Council principal investigator. ADFG, Division of Commercial Fisheries staff will review forms for completeness and train Orutsararmiut Native Council staff to prepare weekly summaries. The Orutsararmiut Native Council project investigator will draft the performance report and coauthor the final report.

FIS 06-307
Inseason Support for Cooperative Management of the Kuskokwim River Subsistence Fishery

Geographic Area: Kuskokwim River

Information Type: Stock Status and Trends

Principal Investigator: John C. Linderman
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Co-Investigators: Michael Martz, ADFG, Division of Commercial Fisheries

Cost:	2006	2007	2008
	$31,010	$32,271	$33,610

Issue

This project supports the coalescing and dispersal of run assessment information needed for cooperative management of the Kuskokwim River subsistence salmon fishery. The fishery is cooperatively managed by the Alaska Department of Fish and Game and U.S. Fish and Wildlife Service, in coordination with the Kuskokwim River Salmon Management Working Group. The Working Group serves as a preseason, in-season, and post-season public forum for Federal and State fisheries managers to meet with local users of the salmon resource and review run assessment information and reach a consensus on how to proceed with management of Kuskokwim River salmon fisheries, especially as it affects subsistence fishing. Agency staff, advisory council members, and the public alike need to view and discuss inseason information in a timely manner. The discussion and decisions made at those meetings need to be noted and reported. Working Group and Regional Council members have asked the Department to provide accurate and timely reporting of these meetings so that information can be more widely distributed to stakeholders and to regulatory bodies including the Alaska Board of Fisheries and Federal Subsistence Board.

Objectives

1. Provide inseason run assessment information to all parties participating in cooperative management of the Kuskokwim River subsistence salmon fishery.
2. Provide a forum for USFWS, Regional Advisory Council members, ADFG and other participants of the cooperative management process to discuss inseason run assessment information and fishery management decisions affecting subsistence fisheries.
3. Provide an opportunity for participants in the cooperative management process to forecast and plan (pre-season) and to summarize (post-season) the fishing season.
4. Report the discussion and decisions made during the cooperative management process.

Methods

Project objectives will be met in support of the Kuskokwim River Salmon Management Working Group process. A Fisheries Biologist I will function as the Working Group coordinator, but will be assisted by ADFG Bethel administrative staff and ADFG management and research biologists. This project is a continuation of FIS 01-116 and seeks funding to support cooperative management of Kuskokwim River subsistence fisheries through the Working Group process. ADFG will coalesce and disperse (1) pre-season run assessment and fishing schedule information, (2) inseason run assessment project results, and (3) harvest assessment information to participants of the cooperative management process. ADFG will also take the lead to document and report Working Group actions by taking minutes and drafting summaries of each meeting for distribution to participants and the public. This project would provide funding for Working Group members outside of Bethel to travel to meetings on an opportunistic basis, including larger scale travel to the post season meeting in September or October. It also provides travel money for a Working Group representative to attend relevant Alaska State Board of Fisheries, Federal Subsistence Board, State and Federal Advisory Council, or ADFG post- and pre-season interagency meetings. Funds will also be used for participants in the cooperative management process to meet by teleconference, receive information by FAX, and to assist in the purchase of meeting supplies and consumables.

Partnership/Collaboration

Local organizations that are involved with the Working Group process include area village governments, Orutsararmuit Native Council, Association of Village Council Presidents, Kwethluk IRA Council, Kuskokwim Native Association (KNA), and the Native Village of McGrath. The Working Group is composed of twelve member organizations or constituencies. These members represent: two Elders (Downriver and Upriver), three Subsistence Fishers (Lower, Middle, and Upper River), one Fish Processor, one Commercial Fisher, one Sport Fisher, one Western Interior Alaska Regional Advisory Council member, one YK Delta Regional Advisory Council member, one member-at-large, and an ADFG Commercial Fisheries Division designee. Each member of the Working Group designates a representative and an alternate in the event the representative is unable to attend a meeting. Other ADFG and USFWS staff attend Working Group meetings as do members of the public.

The Working Group process has received considerable attention as a model for Cooperative Management in resource management. Local subsistence users, Regional Advisory Council members, and local fisheries representatives are given the opportunity to examine and discuss fisheries data as they are being collected and develop recommendations which managers consider carefully. Managers and stakeholders consider the Working Group process essential to the management and conservation of Kuskokwim salmon resources.

06-351
Lower Kuskokwim Non-Salmon Harvest Survey and Local Knowledge Project

Geographic Area: Kuskokwim River Region

Information Type: Harvest monitoring/traditional ecological knowledge (HM/TEK)

Principal Investigator: Tracie Krauthoefer
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Co-Investigator: Jennifer Hooper, Association of Village Council Presidents

Cost:	2005	2006	2007
	$86,140	$91,831	$0

Issue

Communities in the Johnson River, Kialik River, and Eek River areas are highly dependent, both contemporarily and historically, on freshwater fish. These communities are located off the main stem of the Kuskokwim River, close to rivers and large tundra lakes containing numerous freshwater fish species. Previous research indicates freshwater fish comprise the largest portion of the total subsistence fish diet of residents of Nunapitchuk, and that 100% of households report annually participating in the harvest (Andrews 1989). This dependence is likely to increase should current declines in Kuskokwim salmon stocks persist. There has been little documentation of ecological knowledge regarding population dynamics, life histories and critical habitat of freshwater species within this region. This project would collect harvest data on non-salmon species from Tuntutuliak, Eek, and Nunapitchuk, as well as TEK on traditional harvest patterns and use of non-salmon, non-salmon life histories, changing fish populations, health, abundance, distribution, and availability. The primary species of interest will be pike, broad whitefish, humpback whitefish, least cisco, Bering cisco, burbot, anadromous and non-anadromous lamprey, blackfish, rainbow trout, Dolly Varden, and sheefish. Key respondents will also be asked to provide information on beaver and non-salmon fish interactions and ecology.

Objectives

1. Identify, recruit, and train 1-2 technicians in each village (Nunapitchuk, Tuntutuliak, and Eek) to conduct harvest surveys.
2. Conduct non-salmon harvest surveys in Nunapitchuk, Tuntutuliak, and Eek to quantify subsistence harvest of non-salmon fish and document harvest methods, gear, and timing.
3. Interview 15-20 local experts from Nunapitchuk, Eek, and Tuntutuliak about non-salmon subsistence harvest and use patterns, life histories, patterns of seasonal movement, changes in abundance and distribution, location of key aggregation sites, and contemporary and traditional self-management practices.

4. Develop a geospatial database indexing local non-salmon subsistence harvest land use patterns and mapped environmental knowledge of Nunapitchuk, Tuntutuliak, and Eek residents.

Methods

For the harvest assessment, investigators will hire local researchers to conduct census design household surveys in each village and to assist as translators in key respondent interviews. Households will be surveyed annually for two years using standard subsistence division harvest assessment methodology to obtain information about harvest levels, timing, methods, gear and more. Traditional ecological knowledge will be documented through 15-20 key respondent interviews, mapping, and participant observation conducted during the first full year of the project.

Partnerships/Capacity Building

Capacity building with the communities of Nunapitchuk, Tuntutuliak, and Eek and AVCP is a central dimension of this project. Through cooperative agreements between ADFG and the Traditional Councils in all study communities, technical staff will be hired by the Traditional Councils to conduct household surveys in all communities and to assist with translating during interviews. The partnership between ADFG and AVCP will result in increased capacity for AVCP to conduct social science research and ADFG Division of Subsistence staff will benefit through greater understanding of the biological aspects of non-salmon fishery.

06-502
Estimate the Inriver Abundance of Copper River Sockeye Salmon

Geographic Area: Cook Inlet-Gulf of Alaska (Southcentral)

Information Type: Stock Status and Trends (SST)

Principal Investigator: Keith van den Broek
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Co-Investigators: Michael R. Link and Jason J. Smith, LGL Alaska Research Associates
Dr. John H. Clark, ADFG, Division of Commercial Fisheries

Cost:	2006	2007	2008
	$90,897	$0	$0

Issue

Copper River sockeye salmon sustain large and important subsistence fisheries under Federal jurisdiction; and subsistence, commercial and sport harvests are significant in comparison to abundance. Management of Copper River sockeye salmon is complex due to inter-annual variation in the size and timing of stocks, fisheries that target a mixture of stocks and difficulties in estimating abundance due to the physical characteristics of the drainage. Recently, returns of sockeye salmon to several tributaries of the upper Copper River basin (e.g., Gulkana Hatchery, Tanada Creek weir) have been lower than expected given the acoustic-based estimates of abundance obtained from the Miles Lake sonar site. To further confound certainty in the abundance estimates provided by the Miles Lake sonar, the Alaska Department of Fish and Game (ADF&G) is currently upgrading their Bendix acoustic system with a newer and much different acoustic system (dual frequency identification sonar – DIDSON). The management system and management plans for Copper River sockeye salmon have been built around the old Bendix sonar counts. The degree of comparability of the old and new acoustic systems is uncertain and the efficacy of the original Bendix acoustic counter has never been independently validated with an alternative technique.

We propose to use an independent technique to validate estimates provided by the new acoustic system and to the extent it remains, the Bendix-based estimates at Miles Lake. The purpose of this project is to use mark-recapture methods to estimate the weekly abundance of sockeye salmon returning to the Copper River above Miles Lake and compare these estimates to those provided by the Miles Lake sonar gear. The information collected from this project can be used by fishery managers to better manage the subsistence fishery for individual stocks, which ultimately could lead to increased subsistence harvest opportunities.

Objectives

1. To estimate the inriver abundance of sockeye salmon returning to the Copper River in 2006 such that the estimate is within 25% of the true value 95% of the time.

Methods

This project will use two-event mark-recapture methods to estimate the weekly abundance of sockeye salmon at Baird Canyon in 2006. For the first event, sockeye salmon will be spaghetti-tagged daily at two or three fish wheels operated in Baird Canyon (rkm 66) from mid May to mid August. These fish wheels will be located upstream of the Miles Lake sonar site and downstream of any inriver fisheries and major spawning tributaries. The second event will consist of fish examined for tags at two fish wheels located near Canyon Creek (rkm 157), located 12 km downstream of Chitina, AK. The fishing sites at Baird Canyon and Canyon Creek have been used successfully by the project team for these purposes since 2002. In 2005, a feasibility study funded by ADF&G headquarters will be conducted to assess whether digital video-recording (DVR) technology can be used to examine large numbers of fish for external tags during the upstream recovery event at Canyon Creek. If successful, the DVR systems will significantly reduce the amount of effort required to handle and sample fish at the fish wheels, thereby making this entire effort feasible.

Partnerships/Capacity Building

This project gives the Native Village of Eyak an opportunity for meaningful inclusion in the research and long-term management of Copper River sockeye salmon. The Native Village of Eyak will oversee all aspects of the project and provide critical logistical, technical and field assistance, thereby acquiring the array of skills needed to carry out major fisheries assessment projects. The Native Village of Eyak fishery technicians will acquire the necessary skills and experience required for this and other fisheries research jobs. This project will allow the Native Village of Eyak to further develop the skills of its members via local training, hiring for key positions in future fisheries assessment projects, and recruiting and encouraging young people to get an education in fisheries and natural resource management. This project will also promote interaction between a major subsistence group (Native Village of Eyak) and fisheries management agencies (ADF&G Division of Commercial Fisheries). Finally, the overall study design will engage tribal organizations from different regions of the Copper River drainage in discussions on the project and promote interactions amongst subsistence users. The Native Village of Eyak will continue to work with the Tribal Council, staff, consultants and government agencies to identify key personnel to help carry on a long-term program.

06-601
Neva Lake Sockeye Stock Assessment

Geographic Area: Southeastern Alaska

Information Type: Stock Status and Trends

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Co-Investigators: David Belton, Hoonah Indian Association
Meg Cartwright and Jan Conitz, ADFG, Division of Commercial Fisheries

Cost:	2006	2007	2008
	$28,125	$29,035	$31,991

Issue

The escapement of sockeye salmon into Neva Lake was estimated in 2002–2004 through funding provided by the Fishery Resource Monitoring Program. This was a cooperative project involving Hoonah Indian Association, ADFG, and the Forest Service. Project personnel operated a weir on the outlet of Neva Lake and used weir counts and mark-recapture methods to estimate the escapement of adult and jack sockeye salmon. Annual escapements were larger than anticipated – 4,951; 11,099; and 9,515 sockeye escaped in 2002, 2003, and 2004. These were the first estimates on record of the escapement of sockeye salmon into the system.

Project results have helped in raising the subsistence harvest limits from 10 sockeye per household per year to 25 fish in 2003 and 40 fish in 2004. The 2004 season was also extended from the end of July to mid-August once we learned that the run extended through September. Subsistence and sport effort appears to be increasing and stock assessment must be commensurate with the intensity of use.

Over the past three years we've observed a two-fold range in escapement and decrease in percent of jack (one-ocean) sockeye salmon from 24% to 16% to 3%. The high percent of jacks in 2002 was probably a good predictor of the large 2003 run. Likewise, the low percent of jacks in 2004 indicates that the 2005 run will probably be smaller but we will never know unless we continue weir operations. Additional years of escapement and age composition data are needed to reliably assess the health of the Neva sockeye run and assure that the production is not limited by escapement. The low cost of this weir project is possible since weir materials are on site, local hire reduces housing, food, and transportation expenses, and the salary for the Forest Service project leader is already covered.

Objectives

1. Estimate the total escapement of sockeye salmon into Neva Lake using a weir and mark-recapture so that the estimated coefficient of variation is less than 20 percent.

2. Estimate the age, length, and sex composition of the sockeye escapement into Neva Lake from a representative sample of 600 fish.

Methods

A weir will be operated from mid-June through late-September each year. Upstream migrating salmon and trout will be counted as they are passed out of a trap on the face of the weir. Separate counts will be kept for adult and jack sockeye salmon. Project personnel will visit the weir two or more times each day to pass fish so that their migration into the lake is not delayed by the weir. Weir counts, stream temperature and depth measurements, and any field observations will be recorded on data forms.

A mark-recapture study will be done to validate weir counts or estimate the total escapement if we find that sockeye salmon have passed through the weir uncounted. A running average of 20 percent of the sockeye counted through the weir will be finclipped. A unique finclip will be given for each historical third of the run. Finclips will be left axillary, left ventral, and dorsal (clip base of last four fin rays). Sockeye salmon will be examined for these weir marks in the main inlet stream and beach spawning areas on two or more occasions in August and September. More sampling trips will be done if the marking fraction is less than that applied at the weir.

Six hundred sockeye salmon will be sampled at the weir for scale (age), sex, and length data. The weekly sampling goals will be based on the historical weekly proportion of escapement in 2002, 2003, and 2004. Scale sampling and processing methods will follow standard ADFG procedures.

Project personnel will keep records of the subsistence and sport fishing effort and harvest in the Neva Creek and South Creek area. This harvest monitoring will primarily be done when traveling to and from the weir site each day.

Partnerships/Capacity Building

The weir technician will be hired by, and an employee of, the Hoonah Indian Association. The Hoonah Indian Association succeeded in filling all of their positions on the 2002-2004 Neva, Pavlof, and Hoktaheen Lake sockeye stock assessment project with local hires and I anticipate that Hoonah Indian Association will hire locally for this project as well.

06-602
Kutlaku Lake Sockeye Stock Assessment

Geographic Area: Southeast Alaska

Information Type: Stock Status and Trends

Principal Investigators: Meg Cartwright and Jan Conitz
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Co-investigators: Mike Jackson and Dawn Jackson, Organized Village of Kake
Robert Larson, USDA Forest Service

Cost:	2006	2007	2008
	$50,992	$0	$0

Issue

In December 2000, the Federal Subsistence Board passed a regulation, submitted as a proposal by the Organized Village of Kake, to exclude non-Federally qualified users in Federal jurisdiction for Kutlaku Lake drainage. Non-Federally qualified users can be excluded from areas if a conservation concern exists. ADFG asked the Federal Subsistence Board twice to reconsider this restriction for the Kutlaku Lake area. The Department argued that a conservation concern was not clear especially after an additional year of research estimated about 8,500 sockeye spawned in Kutlaku Lake in 2003. The Federal Subsistence Board reaffirmed its commitment to retaining the exclusion of other users in Bay of Pillars in their January 2005 meeting. Clearly, having only one year of good information on this system leaves the results prone to several different interpretations.

Objectives

1. In Kutlaku Lake, estimate the number of sockeye spawners in the study areas on the spawning grounds so that the estimated coefficient of variation is less than 15%.
2. Develop an index ratio between the sum of the observed counts and mark-recapture estimates in the study areas to be used to expand counts to whole lake estimates.
3. Describe the size, sex and age distribution of sockeye salmon adults returning to Kutlaku Lake.

Method

Objective 1: The mark-recapture study will take place on the spawning grounds at Kutlaku Lake in two study areas—one in the inlet stream and one on the beach near the outlet. The crew will make 5–7 trips in the season marking during the first sampling event and counting the number of marked and unmarked fish caught in the second sampling event. For the data analysis, a pooled Petersen estimate will be used in the inlet stream study and a modified Jolly-Seber will be used to estimate the number of spawners in the beach study area.

Objective 2: To estimate the number of spawners along the beach, the crew of three will individually count the number of spawners observed inside and outside the beach study area and calculate an average on each sampling trip. The count within the study area compared with the total lake count will give an average proportion of spawners within the study area, weighted by estimated escapement in the study area per sampling occasion; this will be the estimate of catchable proportion over the entire spawning period. The mark-recapture escapement estimate for the study area will then be multiplied by the inverse of the catchable proportion, to obtain an expanded estimate of escapement for the whole lake.

Objective 3: Approximately 600 scales, matched with sex and length data, will be collected from adult sockeye salmon at the on the spawning grounds in Kutlaku Lake to ensure that we have at least 400 readable scales to age so that we can compare age and length distribution between years.

Partnerships and Capacity Building

The Organized Village of Kake is a co-investigator and directly funded to provide seasonal field staff and administrative oversight of the budget and hiring. The use of tribal technicians in field continues to be a valuable component of the project, contributing to the overall success of the project and improving communication between government managers and the local communities. Organized Village of Kake representatives are very active in the local, regional, and state-wide Federal planning and regulatory agency processes as well as community meetings with ADFG managers and research biologists.

06-651
Southeast Alaska Survey of Customary Trade in Seafood Products

Geographic Area: Southeast Alaska/Tongass National Forest

Information Type: Harvest Monitoring/Traditional and Ecological Knowledge

Principal Investigator: Gordon Jackson
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Co-Investigator: Steve Langdon, University of Alaska Anchorage

Cost:	2006	2007	2008
	$83,655	$222,619	$108,641

Issues

The data gap in the area of customary trade in salmon southeast Alaska on which the research will provide information; the role of the resource (sockeye salmon and its products) through customary trade in meeting cultural needs and requirements will be clarified.

Objectives

1. Identify and describe customary patterns of salmon distribution and exchange based on elder interviews and written documents.
2. Identify levels of subsistence harvest of sockeye salmon for project villages in the past five years.
3. Characterize the distribution process for subsistence sockeye salmon harvests for use and processing within each community.
4. Identify the sockeye salmon products (fresh, frozen, smoked, kippered, nayeeti, dry fish, plain jarred, salted, etc), which enter barter and customary trade networks.
5. Characterize the distribution, barter and customary trade of the various products in terms of practice (i.e., exchange for goods, for services, for money, for ceremonial occasions, for other foods, out of respect) and quantity for each community.
6. Estimate the quantities of sockeye salmon products entering customary trade from each project community and the locations to which various products are sent.
7. Estimate the proportion of subsistence production of sockeye salmon that enters the customary trade sector for each project community.
8. Estimate the value of the customary trade in sockeye salmon products for each project community.
9. Identify the cultural significance of customary trade for ceremonial activities, traditional and contemporary, as well as social and political processes and relations.

Methods

1. Review of documentary sources on customary trade of salmon by Tlingit and Haida in order to provide qualitative information only on species, connections, contexts and
2. Collect Alaska Department of Fish and Game data concerning subsistence harvests of sockeye salmon will be acquired for each project village.
3. Observation of facilities, processing methods and products for subsistence sockeye salmon in the three communities.
4. Interviewing will be a primary data collection technique: formal interviews conducted with elders to obtain information on customary and traditional trading practices in salmon, and interviews with tribally identified experts (3-5) in each community to acquire information about significant contemporary local practices associated with subsistence sockeye production and trade.
5. Members of the producer/processor/trader cohort in each village will be interviewed weekly by tribal researchers in each community who will begin tabulation beginning June 10 and concluding two weeks after the end of the sockeye harvest period.
6. Urban household survey: Tlingit and Haida households in Juneau will be surveyed by use of a standardized questionnaire on their acquisition of sockeye salmon through customary trade and barter.

Partnerships/Capacity Building

The investigators intend to hire three researchers and three research assistants in each of the three project villages. The hires will be made in consultation with the local tribes. Investigators and village researchers will consult with the Division of Subsistence, Alaska Department of Fish & Game. The Central Council of Tlingit and Haida Indian Tribes of Alaska will coordinate this project, providing this regional tribal organization with a continuing role in research and collaboration with the Alaska Department of Fish & Game and with tribal organizations in the four villages. Professor Langdon will develop protocols for conducting the research at the village level, and to do so will collaborate with local tribes, resident elders and identified high harvesters. This study also provides an opportunity for village residents to work in an information-gathering project of direct relevance to their communities.

06-701
Mixed-stock Analysis of Dolly Varden within the Togiak National Wildlife Refuge

Geographic Area: Inter-regional

Information Type: Stock Status and Trends

Principal Investigator: Mark Lisac
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Co-Investigators: Penny Crane, U.S. Fish and Wildlife Service
Kyle Belleque, Bristol Bay Native Association

Cost:	2006	2007	2008
	$49,380	$47,460	$0

Issue:

This proposal addresses information needs identified by the Office of Subsistence Management regarding "the collection of baseline information, including harvest assessment and TEK, for important non-salmon fish species" and "studies of freshwater species important to subsistence uses in the Kuskokwim Region." Most of the waters and subsistence fisheries in this study occur within Togiak and Yukon Delta (YDNWR) National Wildlife Refuges.

Dolly Varden is an important subsistence resource throughout Bristol and Kuskokwim bays in southwest Alaska. Dolly Varden is targeted in subsistence and sport fisheries when populations are mixed during spring and fall migrations and when wintering in freshwater. Dolly Varden abundance in the Togiak Refuge is monitored through subsistence catch data from the Togiak River and through weir counts on the Kanektok and Goodnews rivers. However, without stock specific information, it is impossible to interpret these data because returns of local stocks may be masked by contributions from non-local stocks. In the proposed study, genetic data would be collected from spawning or juvenile Dolly Varden sampled from rivers in southwestern Alaska to expand the existing baseline and test it for use in mixed stock analysis of samples from Togiak, Goodnews, and Kanektok rivers, which account for about 85% of Dolly Varden production in the Togiak Refuge. Results would provide fishery managers with information on Dolly Varden population structure in southwestern Alaska, and potential use of mixed stock analysis for examining harvests and wintering aggregations in this area.

Objectives:

1. Collect tissue from spawning Dolly Varden in tributaries in the Goodnews, Kanektok, and Togiak Rivers and assay genetic variation in these and archived samples from these rivers (N=600 total);

2. Collect tissue from spawning Dolly Varden or juvenile Dolly Varden from two rivers in the Yukon Delta National Wildlife Refuge and from a tributary of the Nushagak River (N=450-600).

3. Evaluate the baseline for mixed-stock analysis using traditional maximum likelihood methods and new methods developed to handle missing baseline.

Methods

Dolly Varden adults would be sampled from spawning sites within the Togiak, Goodnews, and Kanektok rivers, two locations within Yukon Delta National Wildlife Refuge (for example, Eek, Kwethluk, or Tuluksak rivers), and one location in the Nushagak River drainage (Koktuli River). If it is not possible to sample 100-200 adults from each spawning site, juveniles would be sampled with baited minnow traps at several sites within a tributary or during multiple years. Archived samples from prespawning or spawning Togiak River adults (Kashaiak River, Ongivinuk River, and Trail Creek) would also be added to the baseline.

Samples would be genotyped at 10-12 microsatellite loci to assay genetic variation. Each locus and sample would be tested for conformity to Hardy-Weinberg equilibrium and for genotypic disequilibrium, and each sample would be tested to ensure it was taken from a single population. The proportion of variation due to an among-population component would be estimated, allelic heterogeneity between all pairs of collections would be determined, and spatial relationships among populations would be assessed. Maximum likelihood estimates of artificial mixtures would be used to determine which populations or population aggregates could be estimated in mixtures. Using a newly developed mixed stock analysis technique, each population or population aggregate would be treated as a mixture, with remaining populations used as the baseline, to determine how the mixture proportion is allocated among missing and baseline populations.

Partnerships/Capacity Building

To develop this plan, the investigators consulted with Alaska Department of Fish and Game, Yukon Delta National Wildlife Refuge, and Village of Quinhagak. Togiak Refuge has a strong working relationship with the villages of Togiak, Goodnews Bay and Quinhagak, and several residents have served as Refuge employees, interns, or volunteers. Prior to conducting this study, consultations would be held with Village Councils and local Elders. The Togiak Refuge Information Technician, a Togiak resident, would supervise a locally hired technician to conduct fieldwork for this study, and the Bristol Bay Native Association Fisheries Biologist and student interns would be involved in consultations and sampling. The Conservation Genetics Laboratory would work with both Regional Community Development Quota Program groups within the study area (Bristol Bay Economic Development Corporation and Coastal Villages Region Fund) to develop a semester college student internship.

2005

FISHERIES RESOURCE MONITORING PLAN



FEDERAL SUBSISTENCE MANAGEMENT

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INTRODUCTION

Background

On October 1, 1999 and under the authority of Title VIII of ANILCA, the Federal government assumed management responsibility for subsistence fisheries on Federal public lands in Alaska. This imposed substantive new informational needs for the Federal system.

Section 812 of ANILCA directs the Departments of Interior and Agriculture, cooperating with the State of Alaska and other Federal agencies, to research fish and wildlife and subsistence uses on Federal public lands. The challenge posed by dual management of fisheries, coupled with the need to collect more and better information, prompted creation of the Fisheries Resource Monitoring Program (Monitoring Program) within the Office of Subsistence Management (OSM).

> ***The mission of the Monitoring Program is to identify and provide information needed to sustain subsistence fisheries on Federal public lands, for rural Alaskans, through a multidisciplinary, collaborative program.***

To implement the program, five Federal agencies (U.S. Fish and Wildlife Service, Bureau of Land Management, National Park Service, Bureau of Indian Affairs, and USDA Forest Service) work with the Alaska Department of Fish and Game, Regional Advisory Councils, Alaska Native and other organizations to identify research priorities and select projects to meet information needs.

Monitoring Plan Development

Based on identified research priorities, an annual request for proposals is made. An inter-agency Technical Review Committee (TRC) evaluates all proposals and selects the ones that should be developed into investigation plans. The TRC is composed of representatives from each of the five Federal agencies and three representatives from Alaska Department of Fish and Game. It is chaired by the Chief of FIS and supported by FIS staff. The TRC reviews the investigation plans that are submitted and recommends which ones should be included in the annual monitoring plan. Public review of the draft monitoring plan occurs at the Regional Advisory Council meetings during which the Council's recommendations on the plan are made. An inter-agency Staff Committee reviews all recommendations, and attempts to reconcile any differences between the recommendations of the TRC and Councils. The Federal Subsistence Board (Board) then considers these recommendations before approving the final monitoring plan.

Project Evaluation

Four factors are applied to the evaluation and selection of studies:

1. Strategic Priorities

To be considered for funding under the Monitoring Program, there must be, at a minimum, a Federal *nexus*, or interest. Proposed studies must have a direct association to a subsistence

fishery, and either the subsistence fishery or fish stocks in question must occur in waters within or adjacent to Federal public lands. Studies that can establish a Federal *nexus* are then further evaluated for strategic importance within the region in question by assessing:

- ➢ Conservation Mandate – Risk to the conservation of species and populations that support subsistence fisheries and risk to conservation unit purposes.
- ➢ Allocation Priority – Risk of failure to provide a priority to subsistence uses and risk that subsistence harvest needs will not be met.
- ➢ Data Gaps – Amount of information available to support subsistence management. A higher priority is given where a lack of information exists.
- ➢ Role of Resource – Importance of a species to a subsistence harvest (e.g. number of subsistence users affected, quantity of subsistence harvest), and qualitative significance (e.g. cultural value, unique seasonal role).
- ➢ Local Concern – Level of user concern over subsistence harvests (e.g. allocation, competing uses, changes in fish size).

2. Technical-Scientific Merit

Technical quality of the study design must meet accepted standards for information collection, compilation, analysis, and reporting. Studies must have clear objectives, appropriate sampling design, correct analytical procedures, and specified reporting.

3. Past Performance-Administrative Expertise

Investigators and their organizations must have demonstrated technical and administrative expertise to complete prior studies, or have co-investigators or appropriate partnerships with other organizations to meet all requirements of the study. Studies must not duplicate existing projects.

4. Partnership-Capacity Building

Studies must include appropriate partners and contribute to the capacities of rural organizations, local communities, and residents to participate in fisheries resource management. Investigators must have completed appropriate consultations about their study with local villages and communities in the area where the study is to be conducted. Investigators and their organizations should be able to demonstrate the ability to maintain effective local relationships and a commitment to capacity building.

Policy and Funding Guidelines

Several policies have been developed to aid in implementing funding.

- A minimum of 60% of the Monitoring Program funding is dedicated to non-Federal sources.

- Activities not eligible for funding under the Monitoring Program include: a) habitat protection, restoration, and enhancement; b) hatchery propagation, restoration, enhancement, and supplementation; and c) contaminant assessment, evaluation, and monitoring. These activities would most appropriately be addressed by the land management agencies.

- Proposals may be funded for up to three years duration.

Finances and Guideline Model for Funding

The Monitoring Program was first implemented in 2000, with an initial investment of $5 million. Since 2001, a total of $6.25 million is annually allocated for the Monitoring Program. The Department of Interior, through the U.S. Fish and Wildlife Service, annually provides $4.25 million. The Department of Agriculture, through the USDA Forest Service, annually provides $2 million. On an annual basis, this budget funds both continuation of existing studies (year-2 or 3 of multi-year projects), and new study starts. Budget guidelines were established by geographic region and data type (**Table 1**).

Table 1. Current Board guidelines for funding by region for the 2005 Monitoring Program.

Region	Values in 1,000's					
	Dept of the Interior		Dept of Agriculture		Total	
	%	$	%	$	%	$
Northern	17.0%	$244			11.6%	$244
Yukon River	29.0%	$416			19.8%	$416
Kuskokwim River	29.0%	$416			19.8%	$416
Southwest	15.0%	$215			10.3%	$215
Southcentral	5.0%	$ 72	32.5%	$215	13.7%	$286
Southeast Alaska	0.0%	$ 0	62.5%	$413	19.7%	$413
Inter-regional	5.0%	$ 72	5.0%	$ 33	5.0%	$105
TOTALS	100.0%	**$1,433**	100.0%	**$661**	100.0%	**$2,094**

Proposals are solicited according to the following two data types:

1. Stock Status and Trends Studies (SST).

   These projects address abundance, composition, timing, behavior, or status of fish populations that sustain subsistence fisheries with nexus to Federal public lands. The budget guideline for this category is two-thirds of available funding.

2. Harvest Monitoring and Traditional Ecological Knowledge (HM-TEK).

   These projects address assessment of subsistence fisheries including quantification of harvest and effort, and description and assessment of fishing and use patterns. The budget guideline for this category is one-third of available funding.

2005 Fisheries Resource Monitoring Plan

In November of 2003, a request for proposals was issued. Fifty-nine proposals were received in February of 2004. Of these proposals, the TRC recommended 37 for development into investigation plans. Thirty-one investigation plans were received in June of 2004; twenty-one were in the SST category and 10 in the HM-TEK category. The TRC recommended funding 24 of the 31 projects at a cost of $1.9 million. The Regional Advisory Councils supported the TRC's recommendations for 29 of the 31 investigation plans. The two projects the Councils disagreed with the TRC's recommendation were: 05-306 Kuskokwim Inseason Subsistence Salmon Harvest Data Collection and 05-403 Lake Clark Whitefish Assessment.

The FSB reviewed the draft 2005 Fisheries Resource Monitoring Plan in January 2005. The Board selected 24 projects for inclusion in the monitoring plan. Based on this plan, the Monitoring Program funding allocations would be: State agencies (55%), Federal agencies (10%), Alaska Native Organizations (31%), and other non-government organizations (4%) (**Figure 1**).

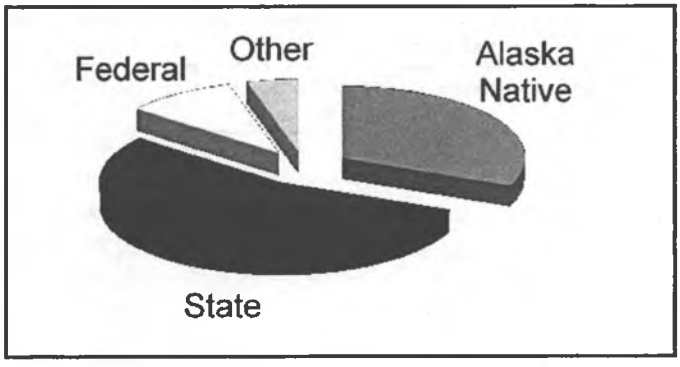


Figure 1. Percent 2005 funding distributed to Alaska Native, Federal, State and other organizations.

Tables summarizing the 2005 Fisheries Resource Monitoring Plan are provided on pages 5-8. More detail descriptions of the projects included in the plan can be found on pages 9-58.

SUMMARY TABLES

Number of projects funded for the 2005 Fisheries Resource Monitoring Plan. Project type includes stock status and trends (SST) and harvest monitoring and traditional ecological knowledge (HM-TEK).

Geographic Region	SST	HM-TEK	Total
Northern	1	0	1
Yukon River	4	1	5
Kuskokwim River	5	2	7
Southwest	3	1	4
Southcentral	2	1	3
Southeast	3	0	3
Inter-regional	1	0	1
Total	19	5	24

Cost of projects funded for the 2005 Fisheries Resource Monitoring Plan. Project type includes stock status and trends (SST) and harvest monitoring and traditional ecological knowledge (HM-TEK).

	Cost ($000)		
Geographic Region	SST	HM-TEK	Total
Northern	$104	$0	$104
Yukon River	$335	$34	$369
Kuskokwim River	$381	$135	$516
Southwest	$130	$77	$207
Southcentral	$262	$85	$347
Southeast	$371	$0	$371
Inter-regional	$30	$0	$30
Total	$1,613	$331	$1,944

Northern Alaska stock status and trends projects funded in 2005.

Project #	Title	Cost ($000) 2005	2006	2007
05-101	Coho Salmon Distribution and Abundance in Unalakleet River	$104	$68	$0
Total		$104	$68	$0

Yukon River region stock status and trends projects funded in 2005.

Project #	Title	Cost ($000) 2005	2006	2007
05-203	Coho Salmon Genetics, Yukon River	$22	$28	$0
05-208	Anvik River Sonar	$59	$59	$59
05-210	Tanana River Fall Chum Salmon Abundance	$172	$167	$162
05-211	Henshaw Creek Weir	$82	$79	$81
Total		$335	$332	$302

Yukon River region harvest monitoring and traditional ecological knowledge projects funded in 2005.

Project #	Title	Cost ($000) 2005	2006	2007
05-254	Yukon River Inseason Salmon Harvest Assessment	$34	$30	$30
Total		$34	$30	$30

Kuskokwim River region stock status and trends projects funded in 2005.

Project #	Title	Cost ($000) 2005	2006	2007
05-301	Whitefish PIT Tags	$40	$0	$0
05-302	Inriver Abundance of Chinook Salmon	$118	$346	$0
05-304	George and Takotna River Weirs	$72	$79	$89
05-305	Genetic Stock ID of Chinook Salmon on Kuskokwim River	$106	$73	$19
05-306	Kuskokwim Inseason Subsistence Salmon Harvest Data Collection	$45	$45	$45
Total		$381	$543	$153

Kuskokwim River region harvest monitoring and traditional ecological knowledge projects funded in 2005.

Project #	Title	Cost ($000) 2005	2006	2007
05-353	Nunivak Island Subsistence Fisheries	$61	$45	$0
05-356	Kuskokwim Area Postseason Subsistence Harvest Survey	$74	$74	$74
Total		$135	$119	$74

Southwest Alaska stock status and trends projects funded in 2005.

Project #	Title	Cost ($000) 2005	2006	2007
05-402	Lake Clark Sockeye Salmon Escapement	$44	$44	$45
05-403	Lake Clark Whitefish Assessment	$71	$101	$62
05-405	Perryville-Chignik Coho Salmon and Late-Run Sockeye Salmon Aerial Surveys	$15	$29	$29
Total		$130	$174	$137

Southwest Alaska harvest monitoring and traditional ecological knowledge projects funded in 2005.

Project #	Title	Cost ($000) 2005	2006	2007
05-452	Non-salmon Harvests and TEK in Togiak, Manokotak, and Twin Hills	$77	$29	$0
Total		$77	$29	$0

Southcentral Alaska stock status and trends projects funded in 2005.

Project #	Title	Cost ($000) 2005	2006	2007
05-501	Spawning Distribution and Run Timing of Copper River Sockeye Salmon	$225	$225	$225
05-502	Abundance, Timing and Distribution of Copper River Steelhead	$37	$37	
Total		$262	$262	$225

Southcentral Alaska harvest monitoring and traditional ecological knowledge projects funded in 2005.

Project #	Title	Cost ($000) 2005	2006	2007
05-553	Changes in Subsistence Salmon Harvests on Copper River	$85	$0	$0
Total		$85	$0	$0

Southeast Alaska stock status and trends projects funded in 2005.

Project #	Title	Cost ($000) 2004	2005	2006
05-601	Kook Lake Sockeye Salmon Assessment	$79	$80	$82
05-603	Klawock Lake Sockeye Salmon Stock Assessment	$164	$168	$0
05-604	Prince of Wales Steelhead	$128	$137	$157
Total		$371	$384	$239

Alaska Inter-regional stock status and trends projects funded in 2005.

Project #	Title	Cost ($000) 2005	2006	2007
05-702	Genetic Species Markers in Whitefish	$30	$30	$0
Total		$30	$30	$0

05-101
Estimation of Coho Salmon Abundance and Spawning Distribution in the Unalakleet River

Geographic Area: Northern Alaska

Information Type: Stock Status and Trends

Principal Investigator: Phil Joy and Audra Brase
ADFG, Division of Sport Fish
Fairbanks, AK
Phone: (907) 459-7351, (907) 459-244
philip_joy@fishgame.state.ak.us, audra_brase@fishgame.state.ak.us

Co-Investigator: Mike Scott, Bureau of Land Management
Meryl Towarak, Native Village of Unalakleet

Cost:	2005	2006	2007
	$103,665	$68,055	$ 0

Issue

The Unalakleet River supports the largest population of coho salmon *Oncorhynchus kisutch* in Norton Sound. This population is harvested by subsistence, commercial and recreational users. Little is known about coho salmon distribution in the Unalakleet River drainage. A counting tower is operated on North River, but coho salmon estimates from North River may not be an accurate index of total Unalakleet River escapement. Aerial surveys to count coho salmon in Unalakleet River are often ineffective due to poor weather conditions.

Objectives

1. Estimate the proportions of the total coho salmon escapement migrating up the mainstem Unalakleet, North, Chiroskey, Old Woman, North Fork Unalakleet rivers, and into all waters designated Federal Wild and Scenic River;
2. Estimate the abundance of coho salmon escaping into the Unalakleet River drainage by proportional expansion of the North River tower count estimate;
3. Estimate the abundance of coho salmon migrating through the Federal Wild and Scenic River portion of the Unalakleet River;
4. Estimate the age, sex, and length composition of the coho salmon escapement into the Unalakleet and North rivers; and
5. Document the locations of coho salmon spawning areas throughout the Unalakleet River drainage, including the Federal Wild and Scenic River portion of the river.

Methods

Two-hundred radio tags would be fitted to individual coho salmon captured using set and drift gillnets at a site approximately 5 km upstream from the mouth of the Unalakleet River. Tags would be deployed in proportion to coho salmon abundance throughout the run, from mid-July through September. Coho salmon fitted with radio tags would also be marked with an external "spaghetti" tag so they can be easily identified if recaptured. Migrating coho salmon fitted with radio tags would be tracked using four remote tracking stations: one located below the tagging site, one between the North and Chirosky rivers on the mainstem of the Unalakleet River, one at the North River counting tower site, and one above the mouth of the Chiroskey River (the boundary of the Federal Wild and Scenic River portion of the Unalakleet River). Aerial tracking would be used to determine spawning locations of all radio-tagged coho salmon.

Partnerships/Collaboration

This project would be performed in cooperation with Bureau of Land and Management, Alaska Department of Fish and Game's Commercial Fisheries Division, and the Village of Unalakleet. The Bureau of Land Management would provide $35,000 each year to purchase radio tags. This project would promote interactions and develop working relationships between stakeholders and a primary management agency. Rural residents would be introduced to potential fisheries careers by working as technicians and hosting them as high school and college interns on the project.

05-203
Yukon River Coho Salmon Genetics

Geographic Area: Yukon River

Information Type: Stock Status and Trends (SST)

Principal Investigators: Blair Flannery, Penny Crane, Jeffery Olsen, and John Wenburg
USFWS, Conservation Genetics Laboratory (CGL)
Anchorage, AK
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Email: blair_flannery@fws.gov

Cost:	**2005**	**2006**
	$ 22,106	$ 27,814

Issue

Coho salmon are an important Yukon River subsistence fishery, comprising 10% of the salmon subsistence harvest. However, little is known about the biology of the Yukon River coho salmon. With the recent decline in Yukon River chum and Chinook salmon, demand for coho will continue to rise, emphasizing the need for a better understanding of this resource. Further, the Regional Advisory Councils for the Yukon River identified the need to identify the contribution of individual or geographically similar populations of Yukon River salmon to mixed-stock fisheries. In this project, we will provide estimates of population structure and genetic diversity of coho salmon within the Yukon River to assist in conservation and management of this species; this work is a necessary precursor for future mixed-stock analysis and harvest allocation.

Objectives

1) Evaluate patterns of genetic diversity within and among nine putative coho salmon populations distributed throughout the Yukon River drainage;

2) Provide preliminary estimates of the power of genetic data for use in various mixed-stock analyses (MSA) of Yukon River coho salmon.

Methods

The population structure and genetic diversity for Yukon River coho salmon will be evaluated using samples collected from the following locations: Archuelinguk, Andreafsky, Anvik, Kaltag, Kantishna, Nenana-Otter Creek, Nenana-17 mile slough, Delta Clearwater, and Fishing Branch. These samples will be assayed for genetic variation at 9 microsatellite loci currently in use for coho salmon research. The data will be tested to determine if sufficient variation exists for mixed-stock analysis applications.

Partnerships/Collaboration

In this project, we will work closely with YRDFA, BSFA, ADF&G, and USGS. In addition, we intend to hire Howard Beans from Mountain Village to sample coho salmon from the Archuelinguk.

05-208
Anvik River Sonar Project

Geographic Area: Yukon River

Information Type: Stock Status and Trends (SST)

Principal Investigators: Carl T. Pfisterer
ADFG
Fairbanks, AK
Phone: (907) 459-7323
Email: carl_pfisterer@fishgame.state.ak.us

Co-Investigators: Roger Dunbar
ADFG

Cost:	2004	2005	2006
	$ 58,589	$ 58,589	$ 58,744

Issue

This project addresses Stock Status and Trends concerns by continuing to monitor summer chum escapement to one of the most important and longest running (began in 1979) summer chum salmon project in the Yukon River. Because of its longevity, this project has been important in setting escapement goals for managing summer chum salmon stocks in the Yukon River drainage. In a larger context, continuation of the Anvik River sonar project will enhance comprehensive research efforts examining this mixed stock fishery and the relative contributions from various tributaries of the Yukon River.

Objectives

The purpose of this project is to monitor escapement of summer chum salmon to the Anvik River and to assess age and sex composition of the escapement. The two primary objectives of this project are to:

1. Estimate daily summer chum salmon escapement passing the Anvik River sonar site during the target operation dates of June 20 through about July 25.

2. Estimate age and sex composition of the summer chum salmon spawning escapements by collecting samples from 152 summer chum during each of 4 stratum throughout the summer.

Methods

Split-beam sonar data will be collected 24-hours per day, 7 days a week for the duration of the study. Data will be collected for thirty minutes, alternating between each bank providing a total of 12 hours of data per day per bank. Counts will be expanded for the fraction of the day sampled to estimate daily passage.

The number of scales required for age-sex-length sampling this season are based on obtaining 152 summer chum salmon for each of the following time strata: June 17-30; July 1-7; July 8-14; and July 15-30. A sample size of 450 fish per stratum is needed for Chinook salmon assuming three major age classes with minor ages pooled and a 14% unageable rate when 3 scales per fish are collected, though attaining this number of samples is not a goal of the beach seining activities associated with the sonar project. Chinook salmon samples are collected during carcass sampling activities immediately after the sonar program terminates.

Partnerships/Collaboration

Daily passage estimates will be shared at with other agencies and organizations at weekly Yukon River Drainage Fisherman's Association meetings and used in making management decisions.

05-210
Estimation of Tanana River Fall Chum Salmon Abundance Using Mark-Recapture Techniques

Geographic Area: Yukon River

Information Type: Stock Status and Trends (SST)

Principal Investigators: Bonnie Borba and Pete Cleary
ADFG
Fairbanks, AK
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Email: bonnie_borba@fishgame.state.ak.us
peter_cleary@fishgame.state.ak.us

Co-Investigators: Hollis Twitchell, Gates of the Arctic National Park and Preserve
Karen Gillis, Bering Sea Fishers's Association
Jill Klein, Yukon River Drainage Fisheries Association

Cost:	2005	2006	2007
	$172,073	$167,062	$162,311

Issue

There is a need to document the abundance and run timing of fall chum salmon within the Tanana River in the upper Yukon River area. This data gap was identified and the initial tagging project began in 1995 for the Tanana River. The addition of the Tanana River abundance project represents a significant improvement in data that was used for in-season assessment, total run reconstructions, and establishment of Biological Escapement Goals for larger drainages. Severe declines in Yukon River drainage fall chum salmon runs have resulted in restrictions and closures in attempts to provide for escapement and the first priority use of subsistence harvest. The Tanana River stocks represent greater than 30 percent of the Yukon River fall chum salmon. However, fall chum salmon bound for the Tanana River pass through mixed stock fisheries along the migration route. The estimates of fall chum salmon in the Tanana River in combination with upper main stem Yukon River project provide a check to the estimates provided by Pilot Station sonar and the information is used for in-season fishery management as well as reconstruction the run post season.

Objectives

1. Estimate abundance *in-season* of fall chum salmon in Upper Tanana and Kantishna River drainages with relative precision (coefficient of variation) of 30%.

2. Estimate stock timing of fall chum salmon in Upper Tanana and Kantishna Rivers and migration rates between capture and recapture sites.

3. Estimate the total abundance of fall chum salmon in Upper Tanana and Kantishna River drainages with relative precision (coefficient of variation) of 20%.

4. Provide managers an assessment of total run based on in-season abundance estimates.

Methods

Alaska Department of Fish and Game (ADF&G), Bering Sea Fishers's Association (BSFA), Yukon River Drainage Fisheries Association (YRDFA) and National Park Service (NPS) propose to provide abundance estimates of fall chum salmon utilizing mark-recapture techniques. Chum salmon will be captured in fish wheels equipped with live boxes, tagged with spaghetti (Floy) tags and released from one site in each of the Tanana and Kantishna Rivers. The tagged chum salmon are subsequently recaptured in tag recovery fish wheels located 76 km upstream on the Tanana River, 113 km upstream on the Toklat River and 139 km upstream on the Upper Kantishna River. Data is relayed to Fairbanks ADF&G office daily during operations from August 15 to September 30. The in-season abundance estimates are typically based on the Bailey model with associated 95% confidence bound.

Partnerships/Collaboration

Operations and maintenance of fish wheels used in the mark-recapture are contracted to four local fishers. The state contracts the Tanana tagging and the Nenana recovery fish wheels since 1995. BSFA funds the Kantishna tagging fish wheel (1999 to present), NPS funds the Upper Kantishna recovery fish wheels (2000 to present), and YRDFA will provide a technician to assist in tagging salmon (2005 to 2007). Freight is barged to the ADF&G camp with the assistance of a local resident in Nenana annually. United States Fish and Wildlife Service assists with technical support for video monitoring at one site.

05-211
Abundance and Run Timing of Adult Salmon in Henshaw Creek, Kanuti National Wildlife Refuge, Alaska

Geographic Area: Yukon River

Information Type: Stock Status and Trends (SST)

Principal Investigators: Jeff Adams
USFWS, Fairbanks Fish and Wildlife Field Office (FFWFO)
Fairbanks AK
Phone: (907) 456-0203; Fax: (907) 456-0208
Email: jeff_adams@fws.gov

Co-Investigators: Kimberly Elkin, Tanana Chiefs Conference, Inc.

Cost:	2005	2006	2007
	$ 82,107	$ 78,500	$ 80,597

Issue

Declines in run sizes of Yukon River salmon, especially Chinook *Oncorhynchus tshawytscha* and chum *O. keta* salmon have resulted in subsistence fishing restrictions and, in some cases, users not meeting their subsistence needs. To manage these stocks in-season, managers need information from throughout the drainage. This project provides in-season information to federal and state managers as an indicator for Koyukuk River salmon stocks.

Objectives

(1) Determine daily escapement and run timing of adult salmon;

(2) Estimate the age, sex and length composition of adult salmon;

(3) Determine the number of resident fish passing the weir;

4) Serve as a training platform for Tanana Chiefs Conference, Inc. (TCC) Natural Resource Program and its FIS Partners program fisheries biologist.

Methods

Investigators will install a resistance board weir across Henshaw Creek 1.5 km upstream from its mouth. The weir, live trap, and passing chute will allow investigators to count fish (by species) as they pass through the live trap. Fish sampling will include measuring length (MEL), determining

sex, collecting scales, and examining fish for floy and radio tags and secondary marks. TCC and FFWFO will partner to incorporate TCC into weir operation including pre- and post-season coordination and planning. TCC will be fully engaged through this funding cycle so that it will be fully capable of administering and conducting all aspects of weir operation after 2007.

Partnership/Collaboration

The FFWFO has worked with TCC to strengthen the capacity building component of this project. Consultation has occurred with Mr. Mike Smith, TCC, Wildlife and Parks, to develop the proposed approach and the integration of TCC in the project and the future of assumption of operations by TCC. The FFWFO staff has established a positive rapport with villages, hired local residents, participated in YRDFA meetings and seminars, and utilized the Kanuti National Wildlife Refuge for local logistical support.

05-254
Yukon River In-season Salmon Harvest Assessment

Geographic Area: Yukon River

Information Type: Harvest Monitoring and Traditional Ecological Knowledge (HM/TEK)

Principal Investigators: Russ Holder and Jonathon Gerken
USFWS, Fish and Wildlife Field Office
Fairbanks, AK
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Co-Investigators: Geoff Beyersdorf, Koyukuk/Nowitna NWR Complex
Jill Klein, Yukon River Drainage Fisheries Association

Cost:	2005	2006	2007
	$ 34,000	$ 30,000	$ 30,000

Issue

Timely subsistence salmon harvest information is needed for in-season fishery management by state and federal fishery managers on the Yukon River. Two key partners, Alaska Department of Fish and Game (ADF&G) and YRDFA, plus the Federal Regional Advisory Councils, have requested assistance from the U.S. Fish and Wildlife Service (USFWS) in obtaining timely qualitative in-season salmon harvest information from rural villages. By conducting in-season salmon harvest surveys there is direct link from subsistence user to managers allowing managers to assess whether subsistence harvests in villages along the Yukon River are consistent with managers perception of the salmon run. These surveys are weekly face to face meetings with local fishers conducted by local technicians that have been hired by nongovernment, tribal, or agency personnel. When fisheries managers know how people are progressing toward meeting their subsistence needs they have more information with which to adjust subsistence schedules, provide for commercial openings, and adjust for liberalization of the fishing schedule.

Objectives

(Local surveyors *at this time* are primarily RITs with some tribal organization representation. Long term objective is to potentially turn in-season salmon surveys over to tribal organizations).

1. Increase involvement and participation of tribal organizations in initiating in-season harvest assessment surveys.

2. Involve local people in fisheries management by having them collect and share information used for in-season fishery management decisions.

3. Train local villagers on in-season salmon harvest survey techniques.

4. Local surveyors weekly will collect qualitative in-season subsistence salmon harvest data in a standardized format from active fishing households.

5. Summarize weekly survey data and provide it to state and federal managers *prior* to the weekly YRDFA teleconferences so it can be used when making management decisions.

6. Local surveyors will present survey summaries and receive information on the YRDFA teleconferences.

7. Broadcast weekly YRDFA teleconference summaries via the local Galena public radio station to keep resource users in the Middle Yukon informed of management decisions.

8. Opportunistically collect age, sex, and length samples from Chinook and chum salmon in coordination with and support of ADF&G.

Methods

The USFWS and YRDFA propose to collect weekly qualitative in-season subsistence salmon harvest data from active fishing households in Emmonak, Holy Cross, Nulato, Huslia, Galena, and Beaver specific to Chinook, summer chum, fall chum, and coho salmon. USFWS RITs and Emmonak/Louden Tribal council local hire surveyors will conduct interviews on participating fishing households between June and September. Sampling for age, sex, and length information will occur opportunistically with subsistence surveys.

Partnerships/Collaboration

This proposal is a collaborative effort between YRDFA, the Emmonak and Louden Tribal Council, Fairbanks Fish and Wildlife Field Office, and several National Wildlife Refuges. The local hire emphasis will promote involvement of local resource users as active participants of the federal and state in-season fisheries management decision process. Local hiring may also help identify individuals interested in the natural resources and help them decide if they have an interest for further study and career selection. A long-term vision for this pilot project is that it could be managed by the USFWS Partner participants (CATG, AVCP, TCC, and/or local tribal organizations) and allow local administration of harvest assessment. Conducting these surveys and using them in management decisions establishes communication and promotes interaction between subsistence users, tribes, organizations, communities, and agencies.

05-301
Using PIT Tags to Monitor Movements of Kuskokwim River Whitefish.

Geographic Area: Kuskokwim River

Information Type: Stock Status and Trends

Principal Investigator: Ken Harper
USFWS, Kenai Fish and Wildlife Field Office
Kenai, AK
Phone: (907) 262-9863
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Co-Investigator: David Cannon, Kuskokwim Native Association

Cost:	2005	2006	2007
	$ 95,000	$ 0	$ 0

Issue

This proposed project evaluates using PIT (Passive Interrogator Transponder) tag technology to gather information on the distribution, movement, abundance and life history of whitefish in the Kuskokwim River drainage. Whitefish are an important subsistence resource in the Kuskokwim River drainage, yet little is known about the status and life history of the stocks. Information on movement patterns from brackish water rearing areas to upstream subsistence harvest areas such as Whitefish Lake and other large tundra lakes is unknown. This proposed project will develop techniques to use this technology to gather information needed to fill the existing data gap. PIT tag interrogation technology has been found to be more appropriate than radio telemetry as a monitoring tool for some fish populations and life history stages. PIT tags are less invasive to implant, less expensive and last longer (indefinitely) than radio tags allowing long term monitoring of individual fish. The use of this technology will improve our knowledge of whitefish movements in the Kuskokwim River. These data will be used by fishery managers and subsistence users to formulate actions required to maintain or rebuild these populations.

Objectives

1) Evaluate capture techniques including mobile Merwin nets, tangle nets, and gill nets to capture live whitefish in multiple habitats.

2) Evaluate PIT tag use in whitefish.

3) Develop and evaluate pit tag interrogator systems for use at the outlet of Whitefish Lake and on the Middle Kuskokwim River salmon mark and recapture fish wheels near Kalskag.

Methods

The Kenai FWFO and Kuskokwim Native Association propose to evaluate the use of PIT tags to monitor movements of Whitefish in the Kuskokwim River drainage. The first year of the project will consist of evaluating capture methods for obtaining large samples of whitefish from multiple habitats including Whitefish Lake, other lakes and riverine systems. Efficient methods and means to implant PIT tags in whitefish will be evaluated, coupled with tag retention and fish survival. PIT tag reader antennas will be constructed and tested in Kenai and shipped to Whitefish Lake. Antennas and antenna placements will be tested for detection efficiency at the outlet of Whitefish Lake. In addition we will use an existing sampling platform, the Middle Kuskokwim River fish wheels operated by ADF&G located near Kalskag to test detection efficiencies.

Partnerships/Collaboration

The U.S. Fish and Wildlife Service and the Kuskokwim Native Association (KNA) have been cooperatively conducting the Whitefish Lake study for the past three years. KNA has shown a keen interest in learning more about whitefish since local fishers have been concerned about the loss of broad whitefish from their traditional Whitefish Lake harvest area. Consultations have been ongoing with ADF&G about installing the PIT tag readers on the Kalskag and Birch Tree fish wheels.

05-302
Inriver Abundance of Chinook Salmon in the Kuskokwim River, 2005-2006

Geographic Area: Kuskokwim River

Information Type: Stock Status and Trends

Principal Investigator: Lisa Stuby
ADFG, Division of Sport Fish
Fairbanks, AK
Phone: (907) 459-7202; Fax: (907) 456-2259
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Co-Investigator: Audra Brase
ADFG, Division of Sport Fish

Cost:	2005	2006
	$349,000[a,b]	$346,211[b]

Issue

The amount of information provided from current Kuskokwim River escapement monitoring and run assessment projects provide limited information to manage the Chinook salmon runs for sustained yield. An estimate of total inriver Chinook salmon abundance is needed to evaluate harvest strategies and effectively manage the Kuskokwim River fisheries to ensure subsistence needs are met.

Objectives

1. Estimate the abundance of Chinook salmon in the Kuskokwim River for all waters upstream of Kalskag; and,

2. Estimate age, sex, and length compositions of Chinook salmon in the Kuskokwim River upstream of Kalskag.

3. Estimate the abundance of Chinook salmon escaping into the Holitna River drainage by proportional expansion of the Kogrukluk River weir count.

[a] Budget for 2005 does not include $231.4 from the Holitna River study (FIS 04-306) that could be redirected to this project (see cover letter). If included, costs for 2005 would be reduced to $117.6 K.

[b] Costs for 2005 and 2006 include funds for personnel from this project to independently operate fish wheels near Kalskag. These costs may be reduced if the current mark-recapture study performed by Commercial Fisheries Division continues through 2006 (see cover letter).

4. Document Chinook salmon spawning locations within the Kuskokwim River drainage.

Methods

This study will estimate the inriver abundance of Chinook salmon on the Kuskokwim River upstream of Kalskag using mark-recapture techniques. In this type of mark-recapture experiment there are two events: 1) the marking event, when fish are captured and tagged; and 2) the recapture event, when fish are sampled again to identify the ratio of tagged to untagged fish. During the marking event of this study, Chinook salmon will be captured using large-mesh drift gillnets and fish wheels at sites near Kalskag. Approximately 500 Chinook salmon will be radio-tagged (marked) with electronic transmitters. Radio-tagged fish will be secondarily marked with an external plastic "spaghetti" tag to facilitate identification of the radio-tagged fish. The tagged Chinook salmon will be tracked by a series of stationary radio-tracking stations positioned on various tributaries and along the mainstem river. Radio-tagged fish will also be located through aerial-tracking surveys of the drainage. The recapture portion of this study will be made up of Chinook salmon passing through the weirs on the George, Kogrukluk, Tatlawiksuk, and Takotna rivers. All migrating Chinook salmon (marked and unmarked) will be counted through the weirs by ADF&G and Kuskokwim Native Association (KNA) staff. Radio-tagged fish migrating through the weirs will be identified from tracking stations positioned at each weir. A sample of the Chinook salmon passing through each weir will be sampled for age, sex, and length data to aid in performing statistical analyses. After all data is collected, it will be edited for accuracy and statistical tests will be performed to accomplish project objectives.

Partnerships/Collaboration

The proposed study will be performed in cooperation with the KNA and ADF&G Commercial Fisheries Division. This project directly promotes interaction between KNA and ADF&G and supports a positive working relationship between a major user group and the primary management agency on the Kuskokwim River. To expose more rural residents to the career field of fisheries biology; a local resident will be hired as a fisheries technician and the project will host local high school and college interns throughout the season.

05-304
George and Takotna River Weirs

Geographic Area: Kuskokwim River

Information Type: Stock Status and Trends

Principal Investigator: Douglas B. Molyneaux
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Co-Investigators: Sara Gilk and Rob Stewart
ADFG, Division of Commercial Fisheries

Cost:	2005	2006	2007
	$ 71,979	$ 78,973	$ 89,257

Issue

Salmon populations of the George and Takotna Rivers contribute to subsistence fisheries within the Yukon Delta National Wildlife Refuge. Weak runs in recent years have resulted in the classification of Kuskokwim River Chinook and chum salmon as Stocks of Concern by the Alaska Board of Fisheries. George and Takotna River weirs are part of an array of projects developed in recent years to monitor the distribution, abundance, and quality of salmon escapements in the Kuskokwim River drainage. Information collected at these weirs is used for in-season management of Kuskokwim River subsistence, commercial, and sport fisheries. Development of Donlin Creek mine is expected to intensify subsistence and recreational use of George River salmon populations. Takotna River weir is the only weir project in the upper Kuskokwim River area used for assessing escapement of these genetically distinct salmon stocks.

Objectives

1. Determine daily and total annual escapements of Chinook, chum, and coho salmon to the Takotna River upstream of the community of Takotna during the target operational period of 24 June to 20 September.

2. Determine daily and total annual escapements of Chinook, chum, and coho salmon to the George River during the target operational period of 15 June to 20 September.

3. Estimate age-sex-length (ASL) composition of total Chinook and chum salmon escapements to Takotna and George Rivers from a minimum of three pulse samples collected from each third of the run, such that simultaneous 95% confidence intervals of age composition in each pulse are no wider than 0.20 ($\alpha = 0.05$ and $d = 0.10$);

4. Estimate age-sex-length (ASL) composition of total coho salmon escapements to Takotna and George Rivers from a minimum of three pulse samples collected from each third of the run, such that simultaneous 95% confidence intervals of age composition in the total annual escapements are no wider than 0.20 ($\alpha = 0.05$ and $d = 0.10$);

5. Serve as platform to collect data for related fisheries projects

Methods

Resistance-board fish weirs will be operated on the George and Takotna Rivers to monitor salmon escapement into spawning grounds upstream. A live trap, incorporated into each weir will allow crews to collect age, sex, and length samples from migrating salmon, and recover tag data in support of *Kuskokwim River Salmon Mark/Recapture Project*. Provisions will also be made to allow for boat passage over the weir and for safe downstream passage of fish. Local technicians hired by Kuskokwim Native Association (KNA) and Takotna Tribal Council (TTC) will operate the weirs along with ADF&G/CF biologists and technicians funded under this proposal.

Partnership/Collaboration

Both the George and the Takotna River weirs are established cooperative projects involving ADF&G/CF, KNA and TTC.

05-305
Genetic Stock Identification of Kuskokwim River Chinook Salmon

Geographic Area: Kuskokwim River

Information Type: Stock Status and Trends

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Cost:	2005	2006	2007
	$105,952	$ 73,151	$ 18,663

Issue

Kuskokwim River Chinook salmon have been identified as a "stock of concern" due to the chronic inability to maintain expected harvest above escapement needs despite the use of specific management and conservation measures. However the efficacy of these measures is uncertain without knowing the harvest of Kuskokwim River stocks in subsistence and commercial fisheries in the entire Kuskokwim Management Area (KMA). Previous investigation of the genetic population structure of Chinook salmon within the KMA, using three different types of genetic markers found patterns of population divergence and identified at least four groups: 1) Goodnews/Kanektok, 2) Lower Kuskokwim (from the Eek River upstream to the Hoholitna River), 3) Middle Kuskokwim (the Stony, Cheeneetnuk and Tatlawiksuk rivers), and 4) Upper Kuskokwim (the Takotna River and Pitka Fork). Genetic stock identification methods can provide information concerning the origins of fish harvested in the KMA; critically important information for an effective, sustainable management program. The existing baseline of genetic markers provides adequate coverage of the spawning aggregates within the Kuskokwim River, but only moderate coverage of the populations outside of the river. We propose to refine our analyses by increasing sample sizes and geographic coverage of the genetic baseline and to begin mixed stock identification applications in KMA fisheries.

Objectives

1. To increase sample sizes and expand collections of Chinook salmon in the KMA.
2. To expand the set of genetic loci to include additional microsatellite and SNP (single nucleotide polymorphism) markers.
3. To analyze the genetic population structure and refine mixed stock analysis.

4. To conduct a pilot study of salmon harvested in mixed stock fisheries, specifically the Bethel test fishery, the subsistence fishery in the Bethel area and the W-4 commercial fishery.

Methods

Baseline tissue sampling will partner with existing projects in the KMA to collect samples. Chinook salmon will be sampled at weirs on the Takotna, Tatlawiksuk, Kogrukluk, George, Tuluksak, Kwethluk, Kanektok and Goodnews rivers. Sampling from radio-tagged Chinook salmon will provide additional baseline samples from locations that do not have weirs. In addition, samples will be taken by subsistence fishers on the Little Tonzona, Eek, and Kisaralik rivers, and on Pitka's Fork, by volunteers on the Arolik River, and by sport fishers on the mainstem Goodnews River. Target sample sizes are set to provide baseline sample sizes of 200 individuals when combined with previously collected samples. Approximately 15 of the most information microsatellite loci developed for the Yukon River and the Pacific Salmon Commission coastwide baseline will be surveyed as well as additional SNP loci developed by ADF&G. Population structure will be investigated using standard population genetics techniques, and mixture analyses will be refined through simulation. Mixture samples will be collected from the Bethel Test Fishery, the Bethel subsistence fishery, and the District W-4 commercial fishery to estimate region of origin.

Partnerships/Collaborations

Samples will be taken at weirs in the KMA in cooperation with the following government and local organizations: ADF&G, Kuskokwim Native Association, Native Village of Kwinhagak, Organized Village of Kwethluk, Orutsaramuit Native Council, Takotna Tribal Council, Tuluksak Tribal Council, and USFWS. Chinook salmon will be sampled from subsistence harvest on the Little Tonzona, Eek, and Kisaralik rivers and the Pitka Fork of the Salmon River. The Arolik River will be sampled by Willard Church (Native Village of Kwinhagak) and the mainstem of the Goodnews River will be sampled by area sportfish guides. Chinook salmon will be sampled as part of the radio telemetry tagging projects and fisheries technicians from ADF&G and ONC will sample the Bethel test fishery. The college intern/technician position in the ADF&G Gene Conservation Laboratory will continue in coordination with KNA.

05-306
Kuskokwim River In-season Subsistence Salmon Harvest Data Collection Continuation

Geographic Area: Kuskokwim River

Information Type: Stock Status and Trends

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Co-Investigators: Greg Roczicka
Orutsararmuit Native Council
Tracie Krauthoefer
ADFG, Subsistence Division
David L. Folletti
ADFG, Division of Commercial Fisheries

Cost:	2005	2006	2007
	$ 73,079	$ 79,177	$ 88,017

Issue

The *Kuskokwim River In-season Subsistence Salmon Harvest Data Collection* project has two components:

1. In-season interviews with subsistence salmon fishers to assess their progress towards achieving harvest needs; and

2. Collection of biological information from subsistence caught Chinook salmon to characterize the unique age, sex and length (ASL) composition of the subsistence harvest, which is a specific subset of the total Chinook salmon run to the Kuskokwim River.

Fishery managers will use the in-season subsistence salmon harvest data when assessing stock status and making in-season management decisions concerning the commercial and subsistence fisheries. The age sex and length (ASL) composition of the subsistence Chinook harvest is a

unique subset of the ASL composition of the Chinook salmon run, which differs from the ASL compositions of the escapement due to the selectivity of the harvest methods.

Objectives

1. Conduct weekly interviews with Bethel Area subsistence salmon fishers in June, July and early August to determine the adequacy and quality of the harvest.

2. Characterize the annual ASL composition of Chinook salmon in the Kuskokwim River subsistence harvest.

3. Characterize and compare the annual ASL composition of Chinook salmon in the Kuskokwim River subsistence harvest by geographic area (lower, middle and upper Kuskokwim River).

4. Characterize the annual ASL composition of Chinook salmon in the Kuskokwim River subsistence harvest by gear type (e.g., gillnets with mesh of 6 inches or smaller, gillnets with mesh between 6 and 8 inches, gillnets with mesh of 8 inches or larger, rod and reel, fishwheel).

5. Characterize and compare the annual ASL composition of Chinook salmon in the lower Kuskokwim River subsistence harvest by temporal strata (i.e., fish harvested for the early, middle and late portions of the run).

Methods

Orutsararmuit Native Council (ONC) will hire two fisheries technicians in consultation with Alaska Department of Fish and Game (ADF&G) staff to conduct weekly in-season interviews with subsistence fishers in the Bethel Area. The information will be used along with other information to guide in-season management decisions.

In addition, the ONC technicians and ADF&G staff will recruit subsistence fishers from throughout the Kuskokwim River drainage to collect ASL data from their subsistence harvest of Chinook salmon. The data will be used to estimate the ASL composition of the Chinook salmon harvest of the Kuskokwim River subsistence fishery.

Partnerships/Collaboration

This project is a collaborative effort between ONC, ADF&G/CF, ADF&G/SD.

05-353
Nunivak Island Subsistence Cod, Red Salmon and Grayling Fisheries – Past and Present

Geographic Area: Kuskokwim River

Information Type: Harvest Monitoring and Traditional Ecological Knowledge

Principal Investigator: Robert M. Drozda
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Co-Investigator: Howard T. Amos
Nuniwarmiut Piciryarata Tamaryalkuti, Inc.

Cost:	2005	2006	2007
	$ 61,000	$ 45,000	$ 0

Issue

Information on the traditional and customary use of Pacific cod, red salmon and Arctic grayling by Nunivak Islanders as well as availability and locations of these subsistence resources is poorly documented. The Yukon-Kuskokwim Regional Advisory Council has identified long term trends and sources of variation of important subsistence species as an information need. This project addresses these concerns and will provide baseline data for comparative future studies.

Objectives

1. Accurately record and map 11 traditional cod fishing areas.
2. Survey fish campers regarding codfish catch at various locations.
3. Survey commercial halibut fishers who use the Mekoryuk fish plant regarding cod by-catch.
4. Conduct literature/internet search relevant to Nunivak Pacific cod, red salmon and grayling.
5. Review Nunivak oral history records, develop context for cod, grayling and red salmon.
6. Identify archives and museums with holdings relevant to Nunivak Island.

7. Conduct interviews and/or surveys with key informants on the historic and contemporary use of the Pacific cod, red salmon and grayling subsistence economy of Nunivak Island.

8. Write a narrative report including a comprehensive bibliography.

9. Publish results and report project design and progress on NPT, Inc website (www.nunivak.org).

10. Prepare draft text for local school natural/cultural resource curriculum.

Methods

Conduct background research using standard library, archival and internet search procedures. Develop survey questionnaire in consultation with subsistence specialists and fisheries biologists. Survey fishers at fish camps and Mekoryuk processing plant. Travel by boat to fishing locations and document sites with GPS and depthfinder. We will partner with the UAF Kuskokwim Campus, NIMA Corporation and USFWS Yukon Delta Refuge at the Ellikarrmiut (Nash Harbor) Science camp in developing research that is useful to students and scientists is successive years.

Partnerships/Collaboration

This project will proceed with the endorsement of the Native Village Mekoryuk IRA Council. Interviews and/or surveys will be conducted by local residents and shared with community members. Results of the study will be distributed to the University of Alaska Rasmuson Library for public access and via the world wide web. Work will be conducted in conjunction with ongoing village based cultural, natural history and Native language preservation projects and will partner with University of Alaska Kuskokwim Campus, Lower Kuskokwim School District, NIMA Village Corporation, and commercial fishery corporations operating in the Bering Sea.

05-356
Kuskokwim Area Post-Season Subsistence Salmon Harvest Surveys, 2005-2007

Geographic Area: Kuskokwim River

Information Type: Harvest Monitoring and Traditional Ecological Knowledge

Principal Investigator: Tracie Krauthoefer
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Co-Investigators: Greg Roczicka
Orutsararmuit Native Council
Dwayne Hoffman
Kuskokwim Native Association, Aniak

Cost:	2005	2006	2007
	$ 74,206	$ 74,206	$ 74,316

Issue

This project will continue the annual subsistence salmon harvest surveys in the Kuskokwim Fisheries Management Area for the year 2005, 2006, and 2007.

Objectives

1. Determine the total number of households in the Kuskokwim Fisheries Management Area and identify the number of households that harvested salmon as well as the number of households that did not harvest salmon for subsistence use. Update the community household lists and mail households salmon harvest calendars the following season.

2. Estimate the total number of Chinook, sockeye, chum, and sockeye salmon harvested for subsistence use by residents in communities throughout the Kuskokwim Area and also non-salmon species harvested by residents of Aniak and Bethel

3. Identify the types of fishing gear used by residents and collect qualitative information that will be helpful in identifying how fishers characterize subsistence fishing success for the 2004 season.

Methods

Methods used for carrying out this work will follow procedures established by the ADFG/SD to conduct subsistence fish harvest surveys in the Kuskokwim Area during 2002 and 2003. Currently ADF&G is working to revise methods, to move from a census to a stratified sample design. A new operational plan will be written and submitted to FIS when the revision is complete.

Partnerships/Collaboration

The ADFG/SD, KNA and ONC have cooperated to successfully complete this project during 2002 and 2003 and are accustomed to working together to collect subsistence fisheries information using the methods described in this investigation plan. This project continues the joint efforts to collaborate to collect critical subsistence fisheries information and encourages ongoing involvement by local tribal entities.

05-402
Lake Clark Sockeye Salmon Escapement and Population Monitoring

Geographic Area: Southwest – Bristol Bay area

Information Type: Stock Status and Trends (SST)

Principal Investigator: Dan Young
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Co-Investigators: Mary McBurney, National Park Service
Dr. Carol Ann Woody, U.S. Geological Survey

Cost:	2005	2006	2007
	$ 44,042	$ 44,502	$ 44,968

Issue

Continued decline in the number of sockeye salmon returning to the Kvichak River is a priority concern to subsistence fishers, the National Park Service and the Alaska Department of Fish and Game. Sockeye salmon bound for Lake Clark comprise 7 to 30% of the total Kvichak River escapement and provide the communities of Newhalen, Iliamna, Nondalton, and Port Alsworth with up to 75% of their total subsistence needs. This project will provide information on daily and annual Lake Clark escapements, return time, age structure, and size composition, all of which will aid in construction of brood tables and trend analysis. This information is needed to define the relationship between Kvichak and Lake Clark sockeye salmon stocks as well as for in- and post-season management decisions.

Objectives

1. Estimate sockeye salmon escapement to Lake Clark.

2. Determine age and size structure of the Lake Clark escapement.

Methods

Sockeye salmon will be counted and sampled as they ascend the Newhalen River. Standard Alaska Department of Fish and Game counting tower protocols will be used to enumerate fish. Age and size data will be collected from sockeye salmon in collaboration with the communities of Newhalen-Iliamna and Nondalton. Locally hired technicians, trained through the National

Park Service-University of Alaska Fairbanks Biotechnician Training Program, will lead or assist salmon escapement and sampling efforts.

Partnerships/Collaboration

This project has an established history of partnerships and capacity building. U.S. Geological Survey has successfully administered projects 01-095 (Population monitoring of sockeye salmon from Lake Clark and the Tazimina River) and 00-042 (Population Assessment of Lake Clark Sockeye Salmon) in collaboration with the Kijik Corporation, Nondalton Tribal Council and villagers, Iliamna-Newhalen villagers, and the Universities of Alaska, Montana, and Washington. Local youths have been trained as technicians and future project leaders through an intern program initiated in 2000.

05-403
Distribution, Seasonal Movement, and Life History of Humpback Whitefish in the Lake Clark Watershed

Geographic Area: Southwest – Bristol Bay area

Information Type: Stock Status and Trends (SST)

Principal Investigators: Julie Meka, Carol Ann Woody
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Co-Investigators: Dan Young, National Park Service
John Chythlook, Bristol Bay Native Association

Cost:	2005	2006	2007
	$ 71,006	$100,969	$ 62,100

Issue

Study of Lake Clark whitefish populations was listed as an important issue for the 2005 Fisheries Resource Monitoring Program. Both subsistence fishers and resource managers are concerned about whitefish population health. Local residents reported a decline in whitefish harvests during fall subsistence gill-net fisheries in the Lake Clark-Lake Iliamna region, and voiced concerns to the Bristol Bay Native Association and Regional Advisory Council. Humpback whitefish *Coregonus pidschian* are the primary harvest target and are typically captured using gill nets in spring and fall. Continued declines in sockeye salmon abundance in the region may have affected whitefish populations by reducing nutrient inputs from salmon carcasses, and increasing subsistence harvest pressure. Lack of basic biological information on whitefish populations in Lake Clark National Park prevents development of sustainable harvest guidelines.

Objectives

1. Determine basic life history characteristics of Lake Clark National Park humpback whitefish populations including age and size, age at maturity, fecundity, and anadromy.
2. Determine seasonal migration patterns and habitat use of Lake Clark National Park humpback whitefish populations.

Methods

Whitefish will be captured during the summers of 2005 and 2006 using seines, and during fall subsistence fisheries using gill-nets. Age, sex, size, and fecundity data will be collected from samples of whitefish captured at various locations. Otoliths will be collected from subsistence-caught whitefish for aging and microchemistry analysis to detect anadromy. About 80 whitefish

captured during the summer of 2006 will be fitted with a radio tag and tracked, using shore-based stationary as well as boat- and aerial-based mobile receivers, through late fall of 2007. Tracking data will be used to identify spawning, feeding, and overwintering habitats. Methods and findings should be transferable to whitefish populations in other Bristol Bay systems.

Partnerships/Collaboration

This project addresses subsistence fisheries monitoring stock status and trends issues in the Bristol Bay region. It will provide local economic benefits through education and regional employment opportunities (2 jobs) as part of the research project.

05-405
Estimation of Coho Salmon Escapement in Streams Adjacent to Perryville and Sockeye Salmon Escapement in Chignik Lake Tributaries, Alaska Peninsula National Wildlife Refuge

Geographic Area: Southwest Alaska – Chignik area

Information Type: Stock Status and Trends

Principal Investigators: Jim Larson
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Cost:	2005	2006	2007
	$ 14,700	$ 29,400	$ 29,400

Issue

Coho salmon *Oncorhynchus kisutch* runs to the Kametolook, Three Star, and Long Beach rivers near Perryville have declined and residents can no longer meet their subsistence needs in those rivers. These residents now harvest coho salmon from streams outside the immediate vicinity of Perryville. With fishing effort spread out to other streams, we need to ensure escapements are maintained to meet Perryville residents' subsistence needs and to sustain these small stocks.

Subsistence fishers in the Chignik area have had difficulty harvesting sockeye salmon *Oncorhynchus nerka* in the Chignik watershed, and are concerned that runs have declined and may be over-exploited by the commercial fishery. We need to monitor late-run sockeye and coho salmon escapement in the Chignik watershed to ensure these runs are sustained and subsistence needs are met.

Objectives

1. Obtain information on spawning distributions and minimum numbers of coho salmon in streams near the village of Perryville.

2. Obtain information on spawning distributions and minimum numbers of spawning late-run sockeye salmon in the Clark River.

Methods

The investigator would use low-level aerial surveys, conducted from a helicopter, to estimate coho and sockeye salmon escapements into streams near Perryville and in the Clark River. Two

aerial surveys would be conducted annually, one in late September and one in mid October. Flights would be coordinated to minimize sampling error by avoiding periods of turbid flow and inclement weather. Survey reaches are considered to be index areas, and counts are considered minimum estimates of coho and sockeye salmon abundance. Periodic aerial counts would provide a minimum index of coho and sockeye salmon escapement. Due to the inclement weather and "flashy" nature of the streams in this region during late fall, getting more precise estimates of salmon escapement is neither logistically feasible nor cost effective.

Partnerships/Collaboration

The project would develop partnerships between King Salmon Fish and Wildlife Field Office and the villages of Perryville, Chignik Lake, Chignik Lagoon, and Chignik Bay through annual meetings that would share project results and solicit additional input from village residents. Perryville residents have knowledge of where fishing pressure has shifted since closure of local rivers, and where monitoring is necessary to ensure escapement needs are met. In-season communication with local village residents would also be necessary to determine if coho and sockeye salmon escapements were sufficient for subsistence uses in each survey stream.

05-452
Non-salmon Fish Harvests and Traditional Knowledge in Togiak, Manokotak, and Twin Hills

Geographic Area: Bristol Bay, Southwest Alaska, Togiak National Wildlife Refuge (TNWR)

Information Type: Harvest Monitoring and Traditional Ecological Knowledge

Principal Investigators: Ted Krieg and Molly Chythlook
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Co-Investigator: Laura Jurgensen, Natural Resources Department
Bristol Bay Native Association

Cost:	2005	2006	2007
	$ 77,225	$ 29,113	$ 0

Issue

Subsistence harvests of non-salmon fish in the TNWR communities of Togiak, Twin Hills, and Manokotak are not monitored annually. Since the last studies in 1995 and 2000, several factors have likely influenced the subsistence fisheries in these communities, including the decline of the commercial salmon fishery and developing recreational fisheries. This study will update harvest and use information and will document any changes in harvest quantities, species used, gear types, and location of harvests. Interviews with key respondents will identify economic, cultural, and environmental factors influencing the characteristics of subsistence harvests and uses.

Objectives

1. Approximately 10 to 15 key respondent interviews about subsistence harvests and uses of non-salmon fish, such as methods and means; changes in the fishery; environmental and other habitat changes; and potential impacts of the sport and commercial fisheries of the Togiak District on subsistence harvests and uses.

2. Estimates of harvests of nonsalmon fish for the calendar year 2005.

3. Maps of locations of harvests nonsalmon fish in 2005 by cultural/biological unit, as mapped in previous research in these study communities.

4. An update of the traditional knowledge database *From Neqa to Tepa.*

Methods

This project involves key respondent interviews and subsistence harvest surveys for nonsalmon fish in three communities within the TNWR: Togiak, Twin Hills, and Manokotak. The first project phase will consist of approximately 10 to 15 key respondent interviews concerning non-salmon TEK. These interviews will be recorded on audiotape and will be conducted in English and Yup'ik depending upon the respondents' preferences and abilities. These interviews will focus on economic, cultural, and environmental factors that are influencing subsistence harvests of nonsalmon fish, and provide guidance for potential questions for the subsequent household survey. The second phase will consist of systematic household surveys in January 2006 documenting the non-salmon fish harvests of 2005. The survey will collect data to estimate subsistence harvests by species and area and gear type, the total number of households that subsistence fished in the study year, and local residents' observations and concerns. The third phase will consist of data analysis and preparation of a final report and an update to the TEK database "From Neqa to Tepa," using the AskSam software program

Partnerships/Collaboration

This project will be a collaboration between the Division of Subsistence of ADF&G and BBNA. Letters of support will be solicited from the tribal council presidents of each of the proposed study communities by BBNA staff, and surveys will include the employment of individuals from each of the communities to assist with interviewing.

05-501
Spawning Distribution and Run Timing of Copper River Sockeye Salmon

Geographic Area: Copper River

Information Type: Stock Status and Trends

Principal Investigator: Keith Van Den Broek, Native Village of Eyak
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Co-Investigator: Jason Smith, LGL Alaska Research Associates, Inc.
James Savereide, Alaska Dept of Fish and Game, Div of Sport Fish

Cost:	2005	2006	2007
	$225,126	$225,126	$225,166

Issue

The purpose of this project is to estimate the run timing and spawning distribution of sockeye salmon stocks returning to the Copper River. Currently, there is limited information on the stock-specific migration rates of sockeye salmon traveling from the Copper River District (and Miles Lake sonar site) through the inriver fisheries, particularly as related to environmental factors such as stage height. Information from this project can be used by fishery managers to better manage the subsistence fishery for individual stocks, which ultimately could lead to increased subsistence harvest opportunities on healthy stocks. This project addresses subsistence fisheries-monitoring issues for Copper River sockeye salmon as outlined by the Federal Subsistence Regional Advisory Council.

Objectives

1. Estimate the proportions of sockeye salmon returning to the major spawning tributaries of the Copper River (Chitina, Tonsina, Klutina, Tazlina, Gulkana and Upper Copper rivers).

2. Describe the stock-specific, migratory timing profile of sockeye salmon.

Methods

This study will estimate the proportion of spawning sockeye salmon in each of six major spawning tributaries of the Copper River and describe the migratory timing profiles for each stock. To achieve this objective, 500 sockeye salmon will be radio tagged each year at

two fishwheels located in Baird Canyon (rkm 66) and tracked throughout the basin using a combination of fixed-station receivers and aerial surveys.

Partnerships/Collaborations

This project will promote the interaction between a major subsistence group (NVE) and various management agencies (USDA Forest Service, U.S. Fish and Wildlife Service, Alaska Department of Fish and Game). The study design will engage tribal organizations from different regions of the Copper River drainage in discussions on the project and promote interactions amongst subsistence users. The Native Village of Eyak will continue to work with their Tribal Council, staff, consultants and government agencies to identify key personnel to help carry on a long-term fisheries-monitoring program.

05-502
Relative Abundance, Migratory Timing, and Overwintering and Spawning Distribution of Steelhead in the Copper River Drainage

Geographic Area: Southcentral

Information Type: Stock Status and Trends

Principal Investigator: Klaus Wuttig
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Co-Investigator: Bruce Cain, Native Village of Eyak
Eric Veach, National Park Service Wrangell/St. Elias
Elijah Waters, Bureau of Land Management

Cost:	2005	2006
	$ 36,500	$ 36,769

Issue

This study will gather information to address stock status and trends issue #1 from the 2005 Issues and Information Needs of the Southcentral Copper River Region. The objectives are designed to estimate and describe the distribution (spawning and overwintering), relative abundance, and migratory timing of steelhead *Oncorhynchus mykiss* in the Copper River drainage using radiotelemetry. Attaining a measure of total run size is needed to assess the vulnerability of these stocks to overexploitation and the need for greater conservation measures such as more restrictive fishing seasons or methods (e.g. no subsistence fishing during the out-migration period of adult steelhead in late May, the inclusion of live boxes on fishwheels, or the closure of sport fisheries). Documentation of significant spawning and overwintering locations throughout the drainage is necessary to adequately manage and protect these critical habitats.

Objectives:

1. Estimate the proportion of Copper River steelhead that migrate to both the Dickey Lake and Hanagita Lake spawning areas such that all estimates are within 10 percentage points of the true values 95% of the time.

2. Describe the migratory timing profile (upriver and downriver) of the steelhead return in the Copper River at the point of capture and investigate potential stock-specific differences in run timing.

A secondary task will be to document significant steelhead aggregations in the Copper River drainage during spawning and overwintering periods.

Methods

This study will use radiotelemetry to determine the relative size of the total return of steelhead to the Copper River drainage. This will be accomplished by estimating the relative contribution of the Dickey and Hanagita lake stocks, for which abundance information has been attained, to the drainage-wide steelhead spawning escapement. Steelhead will be captured using a fish wheel and dip nets located on the east and west banks of the Copper River near Chitina from approximately 20 August to 10 October in 2005 and 2006. Each year, 130 radio tags will be distributed in proportion to fish passage. Run-timing information and documentation of significant spawning and overwintering locations will be attained using a network of 9 ground-based tracking stations positioned strategically throughout the drainage and aerial surveys conducted at biologically meaningful periods (e.g. spawning and overwintering).

Partnerships/Collaboration

Financial consultations have been ongoing with Eric Veach of the NPS and Elijah Waters of the BLM, Glennallen office. Both organizations have agreed to provide financial and in-kind support to help in the project's success. The Native Village of Eyak (NVE) supports this study and their level of involvement depends on the proposed Copper River sockeye salmon study (FIS 05-502). If this proposal is funded and if the Copper River sockeye salmon proposal is funded, funding will be provided to NVE for extending their upriver fishwheel operations for 4-6 weeks to capture and radio-tag steelhead. NVE, NPS, and BLM will be involved in the data collection, analysis, and reporting of results.

05-553
Factors Contributing to Changes in Subsistence Salmon Harvests in the Copper River Basin

Geographic Area: Southcentral

Information Type: Harvest Monitoring and Traditional Ecological Knowledge

Principal Investigator: Dr. William E. Simeone
ADFG, Division of Subsistence
Phone: (907) 267-2309

Erica McCall, Partners for Fisheries Monitoring Program
Native Village of Eyak
Phone: (907) 424-3847

Co-Investigators: Katherine Martin, Mentasta Tribal Council
Julie Bator, Tazlina Tribal Council
JoeNeal Hicks, Cheesh'na Tribal Council
Bry Claw, Gulkana Tribal Council

Cost:	2004	2005	2006
	$ 84,819	$0	$0

Issue

In their final report, the Subsistence Fisheries Harvest Assessment Working Group recommended collecting "contextual information that would assist managers in evaluating and interpreting subsistence harvest data" (Fall and Shanks 2000). The justification for collecting this type of data was that there is "little contextual information available for managers and users to understand changes in harvests from year to year" (Fall and Shanks 2000). In addition, leaders from most of the Ahtna communities have expressed concern that quantitative harvest data does not represent the complete story of how local people's lives have changed and what influences sometimes influence traditional subsistence harvest pursuits. The goal of this project is to provide a context for Copper River subsistence harvest data, and is therefore, a direct response to recommendations of the Harvest Assessment Working Group, as well as issues and information needs identified by OSM-FIS, and Copper River Basin Ahtna leaders. This project will provide information useful in evaluating current subsistence fishery regulations, regulatory proposals, and fisheries management actions, as well as, a tool for understanding trends in the subsistence salmon harvest.

Objectives

1. To determine, using all available quantitative harvest data, if there has been a change, over the last 125 years, in the subsistence harvest of salmon by federally qualified users in the communities of Mentasta, Chistochina, Gulkana, and Tazlina.
2. To hypothesize possible factors that explain observed changes in the subsistence harvests and to test those explanations against quantitative measures, when possible, and against interview data collected from residents of the study communities.
3. To develop comprehensive explanations for changes in the subsistence salmon harvest and to predict likely outcomes of current and potential regulations (completed by October 30, 2006.

Methods:

Methodology includes the collection and assessment of quantitative harvest data, demographic, and economic data, and interviews with local subsistence users about changes in their harvest.

Partnerships/Collaboration

This project is a collaborative effort between the Division of Subsistence, the Tribal entities of the Copper River Basin, and the Partners for Fisheries Monitoring Program Southcentral Regional Social Scientist. The Tribal entities will share in the work by helping develop interview protocols, conducting key respondent interviews, and assisting in the review the final report. The partnerships and capacity development aspects of this project are numerous.

05-601
Kook Lake Sockeye Stock Assessment

Geographic Area: Southeast

Information Type: Stock Status and Trends

Principal Investigator: Ben Van Alen,
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bvanalen@fs.fed.us

Co-Investigators: Raynelle Jack, Angoon Community Association
Meg Cartwright, ADFG, Division of Commercial Fisheries
Jan Conitz, ADFG, Division of Commercial Fisheries

Cost:	2005	2006	2007
	$ 78,620	$ 79,578	$ 81,644

Issue

The current status of the Kook Lake (Basket Bay) sockeye run is poorly understood and of concern. We do not know if annual sockeye escapements are a few hundred fish or several thousand fish. Escapement survey counts and subsistence harvest estimates show declining trends; however, the usefulness of this information is questioned. Few sockeye salmon were marked and recaptured the past three seasons as part of Fishery Resource Monitoring Program project FIS01-126. Project personnel did not see many sockeye salmon in the system and deep water and logs made it difficult to seine fish in beach spawning areas. A weir project now appears to be the best method to measure escapements into this system.

Objectives

1. Estimate the total escapement of sockeye salmon into Kook Lake with a weir/mark-recapture project such that the estimated coefficient of variation is less than 15%.

2. Estimate the age, length, and sex composition of the Kook Lake sockeye escapement so that the estimated coefficient of variation is less than 10%.

3. Clear debris from the cavern entrances on the outlet stream.

Methods

An Angoon Community Association crew will install and operate an adult salmon weir on the outlet of Kook Lake from late-June through early-September of 2005, 2006, and 2007. Weir counts of sockeye salmon will be validated with a mark-recapture study. The age, sex, and length composition of sockeye salmon will be estimated.

Partnerships/Collaboration

Crew members will be hired and employed by ACA. This cooperative ACA/USDA-FS/ ADF&G project will promote public support for our subsistence management program.

05-603
Klawock Lake Subsistence Sockeye Salmon Project

Geographic Area: Southeast

Information Type: Stock Status and Trends

Principal Investigators: Meg Cartwright and Jan Conitz
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Douglas, AK
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jan_conitz@fishgame.state.ak.us

Co-Investigators: Klawock Cooperative Association
Jeff Reeves, US Forest Service

Cost:

2005	2006
$164,238	$167,798

Issue

Investigators will collect data on returning sockeye salmon to Klawock Lake and interview the subsistence fishers in the bay to assist fishery managers in ensuring that escapement and subsistence opportunities are adequate.

Objectives

1. Count the number of sockeye salmon returning to Klawock Lake through the weir.
2. Estimate the annual adult and jack sockeye escapement into Klawock Lake with mark-recapture methods, using the weir as a marking platform and the major spawning grounds as the recapture sites, so that the estimated coefficient of variation is less than 10%.
3. Estimate the spawning population in Three-Mile, Half-mile and Inlet streams using mark-recapture methods so that the estimated coefficient of variation is less than 15%.
4. Describe the size, sex and age distribution of sockeye salmon adults and jacks returning to Klawock Lake.

Methods

The primary focus of this research will be to estimate the number of sockeye salmon adults returning to spawn in Klawock Lake. Standard multi-event mark-recapture statistical methods

will be used to estimate sockeye escapement. Sockeye adults will be marked at the weir. Seven or eight recapture events at the inlet streams will be conducted during the spawning season.

Partnerships/Collaborations

Personnel from the three cooperating agencies, ADF&G, USDA-FS and Klawock Cooperative Association (KCA) have worked closely to ensure the success of the project through training, assistance in the field, and project and budget planning since 2000. Local residents and tribal governments are consulted on a regular basis. ADF&G staff will hold a community meeting in Klawock to describe the study, present the results of first year and get feedback from the community. The ADF&G project leaders and KCA staff communicate on a regular basis about personnel issues, project and budget planning, field expediting and natural resource issues.

Total Project Costs: (Dollars are shown in thousands)

	State	Federal	Non-Agency (KCA)	Total
2005	135.1	–	29.1	164.2
2006	135.7	–	32.1	167.8

Local Hire Costs (these costs are included in the Total Project Costs, above)

	State	Federal	Non-Agency (KCA)	Total
2005	16.8	–	24.9	41.7
2006	16.8	–	27.3	44.1

The Southeast Sustainable Salmon Fund (SSSF) will contribute $32,000 in Federal FY05 and FY06 towards ADF&G permanent staff that oversee this project.

05-604
Adult Steelhead Population Assessments on Prince of Wales Island

Geographic Area: Southeast

Information Type: Stock Status and Trends

Principal Investigator: Glenn Chen
Bureau of Indian Affairs, Alaska Region, Subsistence Branch
Anchorage, AK
Phone: (907) 271-4111; Fax (907) 271-4083

Co-Investigators: Richard Peterson and Cathy Needham, Organized Village of Ka'saan
Roger Harding and Randy Mullen, ADFG, SE Sportfish Research Division
Steve Hoffman and Steve McCurdy, ADFG, SE Sportfish Research Division
Sheila Jacobsen and Jeff Reeves, USDA Forest Service, Craig Ranger District
Susan Howell, USDA Forest Service, Thorne Bay Ranger District

Cost:	2005	2006	2007
	$127,708	$136,908	$156,921

Issue

Steelhead (*Oncorhynchus mykiss*) comprise an important subsistence fishery for rural residents of Prince of Wales Island (southeast Alaska region). Contemporary subsistence steelhead harvest by PWI residents estimated across all 12 PWI communities was 770 fish, with most of this harvest being taken by rod and reel, and occurring primarily among residents of Craig, Klawock, and Hydaburg. Analysis of this data suggests that a total annual harvest of about 600 fish occurs on Federal lands on Prince of Wales Island. Proposed regulations that established a limited Federal subsistence fishery for this species were approved by the Federal Subsistence Board in December 2002.

Little historical information is available to document population sizes, age/sex/length characteristics, run timing, and/or spatial distribution of steelhead on the majority of Prince of Wales Island (PWI) streams. There are 74 drainages known to contain steelhead on Prince of Wales Island. At present, each system is being managed according to categories of "small" (<150) or "large" (>150) numbers of adult spawners. Lack of more recent and accurate data has hampered efforts to assess the potential effects of subsistence fishing and/or catch-and-

release sport angling, and prevents the refinement of regulations that would ensure adequate conservation of steelhead, while allowing for expanded harvest opportunities.

In contrast to other Pacific anadromous salmonids, there are unique aspects of steelhead life history and ecology that make this species more difficult to study. Biologists continue to be concerned that low to moderate levels of harvest on PWI streams could potentially create conservation concerns, in a number of these systems. At present, a proposal has been submitted to the Federal program to expand subsistence harvest opportunities for steelhead across the entire Region. Given that quantitative population data for these fish are unavailable for the majority of stocks in southeast Alaska, there is an urgent need to develop and test alternative enumeration methodologies that are cost-effective, efficient, and that can yield data with the precision sufficient for management by State and Federal agencies.

This project will provide much needed quantitative data on adult spawning populations, run timing, and age/sex/length characteristics within a subset of PWI streams that support steelhead harvests by local subsistence users, and provide research/development on alternatives to full duration weir studies. It addresses an important southeast Alaska region Federal subsistence fishery monitoring issue, identified by the SERAC during the fall 2002 meetings, and listed in their current Issues and Information Needs.

Objectives

1. Estimate the abundance of returning adult spring steelhead in a sub-set of seven to nine Prince of Wales Island streams, representing management categories of "large" (N > 150) versus "small" (N < 150) populations of fish.

2. Quantitatively estimate the sex and length compositions, and incidence of repeat spawning, of spring-run adult steelhead in the selected sub-set of PWI streams.

Methods

This project is being proposed as a 3-year study (FY 2005 - 2007) to obtain quantitative information on the abundance of spring adult steelhead stocks in seven (7) freshwater stream systems on Prince of Wales Island (representing 10% of the Island's steelhead systems). If funded, it will also expand upon a pilot effort that has been initiated in by ADF&G and USDA-FS on the Island in spring 2004, in 12-Mile Creek.

STEELHEAD ABUNDANCE

STEELHEAD ABUNDANCE will focus on the collection of population data in an annual subset of PWI stream systems that support spring runs of adult steelhead. Selected streams will be stratified based on **management categories** based on population size and **accessibility**, with selection selected based on their importance to subsistence users. Weirs will be operated in each study stream for a limited, 8-week period corresponding to the main run timing for spring returning adult steelhead. These counts will serve as a "minimum" population estimate for each of the study streams, and are anticipated to provide information of sufficient resolution to address subsistence management issues on Prince of Wales Island. Channel-spanning, aluminum

and steel tripod/bipod weirs with fixed or floating center panel sections will be constructed and operated for 8 weeks (April 1st through May 31st), to enumerate upstream migrating steelhead spawners. These counts will serve as a "minimum" population estimate for each of the streams, and are anticipated to provide information of sufficient resolution to address subsistence management issues on Prince of Wales Island.

Results from the Spring 2004 Pilot Study

USDA Forest Service and Alaska Department of Fish and Game biologists conducted a pilot study during March – May 2004, to evaluate the effectiveness of a mark-recapture study design for assessing steelhead populations on the streams of Prince of Wales Island. This work was conducted on 12 Mile Creek, a system that is typical of many small to moderate-sized streams on PWI. The 2004 pilot study on 12 Mile Creek indicated that mark-recapture using only seines and angling methods was largely unsuccessful, inefficient, and ineffective. When these techniques are combined with visual sightings as a re-capture method, the resulting population estimates had large variances and low precision.

While visual sightings via snorkeling were found to be successful for "re-captures", a weir proved to be necessary for tagging a sufficient number of fish during the initial marking sessions to obtain a reliable population estimate. After the initial investment in supplies and materials is made, however, the costs of operating a weir are equivalent to, or less than, that required for a mark-recapture efforts (in fact, more personnel are needed to operate seines). For adult steelhead, tag loss was high and affected population estimates as well. In addition, the resulting stress associated with increased handling in a mark-re-capture study with angling or seining must also be considered, especially given that steelhead numbers in most PWI systems are small (the loss of a few individuals due to handling mortality may be significant for such populations). Based on these results, the principal investigators do not recommend that mark-re-capture techniques be utilized for addressing this study objective in the proposed research.

SEX, LENGTH, and INCIDENCE OF REPEAT SPAWNING

SEX, LENGTH, and INCIDENCE OF REPEAT SPAWNING will be collected from a sub-set of adult steelhead captured in the study streams. Steelhead length will be determined by measurements from mideye to forkofcaudalfin to the nearest 5 mm. Sex will be determined by observing external characteristics. The incidence of repeat spawning and saltwater age at initial spawning will be determined from scale pattern analysis. Scale samples will be cleaned and mounted on gum cards to facilitate making triacetate impressions of the scales. Samples will be stored and archived by ADF&G, and scale analysis will be conducted by Department in 2007.

Partnerships/Collaboration

This project will promote and enhance working relationship among the State and Federal agencies, and the local communities on Prince of Wales Island. The Organized Village of Kasaan is a principal investigator and will receive funds and the responsibility for employing of up to 4 fisheries technicians, to assist the State and Federal biologists in conducting the field work associated with this study. Priority will be given to local hire of qualified. The proposed study will help to expand OVK's capacity for fisheries resource monitoring.

PWI Native organizations, represented by the Hydaburg Cooperative Association, Craig Community Association, Klawock Community Association, and OV Kasaan were consulted. Each of these groups have expressed strong support for this project. ADF&G local managers, and line officers/natural resources staff members at the USDA Forest Service offices in Craig, Thorne Bay, and Ketchikan have indicated that they also fully support the proposed study and will be contributing in-kind contributions of salaries, travel, and helicopter transportation costs.

05-702
Genetic Species Markers and Population Structure in Alaskan Whitefish

Geographic Area: Inter-Regional

Information Type: Stock Status and Trends

Principal Investigators: John Wenburg, Eric Kretschmer, and Steve Miller
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Co-Investigators: Randy Brown, USFWS, Fairbanks Fish and Wildlife Field Office (FFWFO)
Ken Harper, USFWS, Kenai Fish and Wildlife Field Office (KFWFO)

Cost:	**2005**	**2006**
	$ 30,188	$30,188

Issue

There is a large and growing need for information on whitefish (for the purpose of this proposal, the term 'whitefish' includes all Alaskan *Coregonus*, *Presopium* and *Stenodus* species, except where specifically noted) as it relates to management of subsistence fisheries throughout Alaska. Furthermore, across Alaska, residents have expressed concern about the status of whitefish resources. A critical initial step in properly addressing whitefish biology and management in Alaska is to characterize their genetic population structure. Currently, there are little or no population genetic data available for whitefish in Alaska. It is believed that there are relatively few whitefish spawning areas, even in large systems like the Yukon River, and there is little or no information on how populations are structured genetically. In order to properly manage whitefish (e.g., assess abundance, stock structure, distribution, movement patterns, life history and reasons for potential declines) we must be able to determine the geographic scale at which their populations are structured.

Furthermore, current management for whitefish in Alaska is imprecise as it is based on a 'whitefish group' where species are not distinguished. Juvenile whitefish bear little resemblance to the adult forms, since many of their morphometric characteristics are not fully developed or easily recognizable, and hybridization appears to be widespread. Even "pure" adults can be difficult to reliably identify morphologically, depending on the local experience of the biologist. A genetic method to distinguish between species will allow us to 1) verify the species status of individual samples; 2) assess the extent and importance of hybridization between species; and 3) is the first step in developing a reliable field identification key for adults and juveniles.

Objectives

1. Apply a set of 10 microsatellite loci (described below) to assess large scale population structure to 100 humpback whitefish from each of five geographic regions across Alaska.
2. Apply a set of 10 microsatellite loci (described below) to assess small scale population structure within the Yukon River to 38-100 humpback whitefish from each of eight previously determined spawning sites as given in Objective 1.
3. Develop diagnostic genetic markers to discriminate among Alaskan whitefish species: inconnu (*Stenodus leucichthys*), broad whitefish (*Coregonus. nasus*), humpback whitefish complex (*C. pidschian*), Bering cisco (*C. laurettae*), least cisco (*C. sardinella*), round whitefish (*P. cylindraceum*), and pygmy whitefish (*P. coulteri*).

Project Description

Objectives 1 and 2) Collections to be analyzed in the project were chosen to represent a mix of proximate and distant collections, in order to identify the geographic boundaries of populations and the connectivity between them. Tissues collected between 1998 and 2003 are archived in the CGL (N = 469; Figure 1). We will attempt to collect additional samples from the Coleville, Copper, Selawik and Kuskokwim Rivers during the summer of 2004 (target N = 200-400; Figure 1).

Objective 3) Tissue samples from 2-10 adults of seven whitefish species reliably identified by experienced field biologists were collected from 1998 to 2004 and archived at CGL. The geographic range of the samples extended from Alaska to Montana, and included some putative hybrids. In collaboration with the University of Montana, we will use PINE (paired interspersed nuclear elements) nuclear molecular markers (Spruell et al. 2001) in an attempt to describe diagnostic species markers.

Partnerships/Collaboration

This project involves significant collaboration with faculty and graduate students at the University of Laval and the University of Montana. Furthermore, we have discussed this project with the Council Athabascan Tribal Governments Natural Resources Department (CATGNR) management team. The CATGNR represents a consortium of ten Gwich'in and Koyukon Athabascan tribes located throughout the Yukon Flats. The CATGNR agrees to the merit and need for this study and further development. This project will, to the extent possible, hire local residents of the Yukon Flats to assist with netting to capture whitefish at various locations.

2004 Fisheries Resource Monitoring Plan

Number of projects funded for the 2004 Fisheries Resource Monitoring Plan. Project type includes stock status and trends (SST) and harvest monitoring and traditional ecological knowledge (HM-TEK).

Geographic Region	SST	HM-TEK	Total
Northern	5	3	8
Yukon	9	8	17
Kuskokwim	11	4	15
Southwest	7	3	10
Southcentral	5	1	6
Southeast	6	2	8
Inter-regional	2	1	3
Total	45	22	67

Cost of projects funded for the 2004 Fisheries Resource Monitoring Plan. Project type includes stock status and trends (SST) and harvest monitoring and traditional ecological knowledge (HM-TEK).

	Cost ($000)		
Geographic Region	SST	HM-TEK	Total
Northern	$547	$169	$716
Yukon	$1,029	$353	$1,382
Kuskokwim	$1,291	$302	$1,593
Southwest	$754	$179	$933
Southcentral	$561	$90	$651
Southeast	$684	$162	$846
Inter-regional	$99	$78	$177
Total	$4,965	$1,333	$6,298

Northern Alaska stock status and trends projects funded in 2004.

Project #	Title	Cost ($000) 2004	2005	2006
04-101	Selawik Refuge Inconnu Abundance	$225	$207	$0
04-102	Selawik Whitefish Radio Telemetry	$99	$93	$31
04-103	North Slope Dolly Varden DIDSON Assessment	$53	$183	$108
04-105	Pikmiktalik River Salmon Escapement	$116	$113	$0
04-109	Wulik River Dolly Overwintering Stocks	$54	$35	$26
Total		$547	$631	$165

Northern Alaska harvest monitoring and traditional ecological knowledge projects funded in 2004.

Project #	Title	Cost ($000) 2004	2005	2006
04-151	Customary Trade of Fish on Seward Peninsula Area	$83	$95	$58
04-153	Pre-commercial Subsistence Fisheries Baseline Data	$48	$0	$0
04-157	Exploring Approaches to Sustainable Fish, NW Arctic	$38	$42	$48
Total		$169	$137	$106

Yukon River region stock status and trends projects funded in 2004.

Project #	Title	Cost ($000) 2004	2005	2006
04-206	Tozitna River Weir	$66	$66	$66
04-208	E. Fork Andreafsky River Weir	$80	$85	$90
04-209	Gisasa River Weir	$80	$83	$86
04-211 [a]	Henshaw Creek Weir	$25	$0	$0
04-217	Rampart Rapids Fall Chum Salmon Abundance	$296	$304	$317
04-228	Yukon River Chum Salmon GSI	$78	$107	$0
04-229 [b]	Lower Yukon River Salmon Drift Test Fishing	$105	$17	$53
04-231	Yukon River Chinook Telemetry	$296	$301	$301
04-234	Kaltage Chinook Salmon ASL Sampling	$3	$3	$3
Total		$1,029	$966	$916

Yukon River region harvest monitoring and traditional ecological knowledge projects funded in 2004.

Project #	Title	Cost ($000) 2004	2005	2006
04-251	Traditional Ecological Knowledge Camp in Fort Yukon	$51	$57	$0
04-253	Upper Tanana Subsistence Fisheries Traditional Ecological Knowledge Study	$54	$82	$61
04-255	Tradtional Ecological Knowledge of Upper Yukon River Salmon	$23	$27	$0
04-256	Tanana Conservation Outreach	$26	$26	$0
04-263	Yukon River Salmon Management Teleconferences	$15	$15	$15
04-265	Traditional Ecological Knowledge of Customary Trade of Subsistence Fish, Yukon River	$39	$29	$0
04-268	Hooper Bay Subsistence Monitoring Project	$36	$0	$0
04-269	Traditional Ecological Knowledge and Radio Telemetry Study of Whitefish, Kanuti NWR	$109	$84	$36
Total		$353	$320	$112

[a] Approved as an out-of-cycle project by OSM.

[b] FY2004 funding includes support for Year 1 and partial support for Year 2 activity.

Kuskokwim River region stock status and trends projects funded in 2004.

Project #	Title	Cost ($000) 2004	2005	2006
04-301	Kwethluk River Weir	$131	$131	$131
04-302	Tuluksak River Weir	$120	$120	$120
04-304	Whitefish Lake Telemetry of Whitefish	$110	$110	$0
04-305	Kanektok River Weir	$129	$131	$131
04-306	Holitna River Chinook and Chum Salmon Telemetry	$231	$240	$0
04-307	Kuskokwim ASL Sampling Program	$85	$88	$88
04-308	Kalskag Mark Recapture Study	$141	$145	$145
04-309	KNA Internship Program	$23	$23	$23
04-310 [a]	Tatlawiksuk River Weir	$200	$42	$122
04-311	Kuskokwim Coho Salmon Genetic Mixed Stock Assessment	$66	$0	$0
04-312 [a]	Goodnews River Weir Coho Salmon Extension	$55	$0	$28
Total		$1,291	$1,030	$788

Kuskokwim River region harvest monitoring and traditional ecological knowledge projects funded in 2004.

Project #	Title	Cost ($000) 2004	2005	2006
04-351	Kuskokwim Bay Traditional Ecological Knowledge and Oral History	$49	$0	$0
04-353	Bethel Area Inseason Subsistence Salmon Data Collection	$62	$0	$0
04-355	Middle Kuskokwim River Inseason Salmon Harvest Survey	$32	$0	$0
04-359	Kuskokwim Area Postseason Subsistence Harvest Surveys	$158	$0	$0
Total		$301	$0	$0

[a] FY2004 funding total includes support for two years of activity.

2004 Fisheries Resource Monitoring Plan

Southwest Alaska stock status and trends projects funded in 2004.

Project #	Title	Cost ($000) 2004	2005	2006
04-401	Ungalikthluk River Rainbow Trout Assessment	$51	$0	$0
04-402	Mortensens Creek Sockeye and Coho Salmon Escapement	$95	$93	$96
04-403	McLees Lake Sockeye Salmon Escapement	$79	$76	$79
04-411 [a]	Lake Clark Sockeye Salmon Run Timing	$137	$10	$75
04-412 [b]	Afognak Lake Sockeye Salmon Assessment	$152	$0	$69
04-414 [b]	Buskin River Sockeye Salmon Escapement	$129	$0	$66
04-415	Tazimina River Rainbow Trout Assessment	$111	$0	$0
Total		$754	$179	$385

Southwest Alaska harvest monitoring and traditional ecological knowledge projects funded in 2004.

Project #	Title	Cost ($000) 2004	2005	2006
04-454	Bristol Bay Sharing, Bartering and Trade	$74	$98	$27
04-456	Salmon Harvest Assessment & Traditional Ecological Knowledge - Aleutian Is	$44	$20	$0
04-457	Subsistence Harvest Assessment & Traditional Ecological Knowledge - Kodiak	$61	$53	$19
Total		$179	$171	$46

[a] FY2004 funding total includes support for Year 1 and partial support for Year 2 activity.

[b] FY2004 funding total includes support for two years activity.

Southcentral Alaska stock status and trends projects funded in 2004.

Project #	Title	Cost ($000) 2004	2005	2006
04-501	Long Lake Sockeye Salmon Escapement	$18	$18	$18
04-502	Tanada Creek Sockeye Salmon Escapement	$63	$63	$63
04-503	Copper River Chinook Salmon Abundance	$297	$334	$334
04-506	Copper River Sockeye Salmon Assessment	$68	$59	$66
04-507	Copper River Stock Assessment of Chinook Salmon	$115	$115	$51
Total		$561	$589	$532

Southcentral Alaska harvest monitoring and traditional ecological knowledge projects funded in 2004.

Project #	Title	Cost ($000) 2004	2005	2006
04-553	Traditional Ecological Knowledge Long Term Changes in Salmon Runs, Copper River	$90	$117	$0
Total		$90	$117	$0

Southeast Alaska stock status and trends projects funded in 2004.

Project #	Title	Cost ($000) 2004	2005	2006
04-604	Klawock Lake Sockeye Salmon Escapement Assessment	$171	$0	$0
04-605	Angoon Area Sockeye Salmon Escapement Assessment	$85	$89	$95
04-606	Hetta Lake Sockeye Salmon Escapement Assessment	$92	$94	$96
04-607	Kake Area Sockeye Salmon Escapement Assessment	$130	$136	$146
04-608	Salmon Lake Sockeye Salmon & Coho Salmon Escapement Assessment	$92	$115	$115
04-609	Klag Lake Sockeye Salmon Escapement Assessment	$114	$117	$118
Total		$684	$551	$570

Southeast Alaska harvest monitoring and traditional ecological knowledge projects funded in 2004.

Project #	Title	Cost ($000) 2004	2005	2006
04-651	Traditional Ecological Knowledge and Subsistence Salmon Monitoring	$79	$146	$89
04-652	Subsistence Traditional Ecological Knowledge Database	$83	$88	$98
Total		$162	$234	$187

Alaska Interregional stock status and trends projects funded in 2004.

Project #	Title	Cost ($000) 2004	2005	2006
04-701	Develop Shared Fishery Database	$75	$31	$31
04-703	Hatching Success of Eulachon Eggs	$24	$19	$0
Total		$99	$50	$31

Alaska Interregional harvest monitoring and traditional ecological knowledge projects funded in 2004.

Project #	Title	Cost ($000) 2004	2005	2006
04-751	Subsistence Harvest Database Update/ Report Preparation	$78	$77	$76
Total		$78	$77	$76

2003 Fisheries Resource Monitoring Plan

Number of projects funded for the 2003 Fisheries Resource Monitoring Plan. Project type includes stock status and trends (SST) and harvest monitoring and traditional ecological knowledge (HM-TEK).

Geographic Region	SST	HM-TEK	Total
Northern	2	1	3
Yukon River	7	2	9
Kuskokwim River	7	0	7
Southwest	5	0	5
Southcentral	3	2	5
Southeast	3	1	4
Total	27	6	33

Cost of projects funded for the 2003 Fisheries Resource Monitoring Plan. Project type includes stock status and trends (SST) and harvest monitoring and traditional ecological knowledge (HM-TEK).

	Cost ($000)		
Geographic Region	SST	HM-TEK	Total
Northern	$159	$45	$204
Yukon River	$300	$44	$344
Kuskokwim River	$407	$0	$407
Southwest	$195	$0	$195
Southcentral	$284	$165	$449
Southeast	$277	$40	$317
Total	$1,622	$294	$1,916

Northern Alaska stock status and trends projects funded in 2003.

		Cost ($000)		
Project #	Title	2003	2004	2005
02-020	Pikmiktalik River Salmon Escapement	$97	$0	$0
03-012	Kaktovik Lagoons Cisco & Dolly Varden Assessment	$62	$53	$52
Total		$159	$53	$52

Northern Alaska harvest monitoring and traditional ecological knowledge projects funded in 2003.

		Cost ($000)		
Project #	Title	2003	2004	2005
03-016	Selawik River Harvest of Spring & Fall Fish	$45	$0	$0
Total		$45	$0	$0

Yukon River region stock status and trends projects funded in 2003.

Project #	Title	Cost ($000) 2003	2004	2005
00-023	Migration Patterns and Critical Habitats of Radio-Tagged Humpback Whitefish in the Upper Tanana River Drainage	$43	$0	$0
00-025	Abundance and Run Timing of Adult Salmon in the Henshaw Creek, Kanuti NWR	$74	$0	$0
03-009	Abundance and Run Timing of Adult Salmon in the Tozitna River	$27	$0	$0
03-013	Abundance and Run Timing of Adult Salmon in the Gisasa River, Koyukuk NWR	$70	$0	$0
03-034	East Fork Andreafski River Weir	$53	$0	$0
03-038	Yukon River Sub-district 5-A Test Fishwheel Project	$33	$0	$0
Total		$300	$0	$0

Yukon River region harvest monitoring and traditional ecological knowledge projects funded in 2003.

Project #	Title	Cost ($000) 2003	2004	2005
00-022	Hooper Bay Subsistence Salmon Monitoring Project	$26	$0	$0
03-015	Phenotypic Characterization of Chinook Salmon in the Subsistence Harvest	$18	$0	$0
Total		$44	$0	$0

2003 Fisheries Resource Monitoring Plan

Kuskokwim River region stock status and trends projects funded in 2003.

Project #	Title	Cost ($000) 2003	2004	2005
00-007	Tatlawiksuk River Weir Operations	$87	$0	$0
00-019	Kwethluk River Weir	$112	$0	$0
00-027	Extend Goodnews Weir Operations to Count Coho Salmon	$27	$0	$0
01-117	Kuskokwim Salmon Age-Sex-Length Assessment	$37	$0	$0
03-030	Kuskokwim River Chum, Sockeye, and Coho Salmon Stock Assessment	$50	$0	$0
03-041	Preliminary Assessment of Genetic Variation Among Coho Salmon Populations	$39	$0	$0
03-931[a]	KFRC - BSFA Partnership to Develop Gap Analysis and Science Plan for Salmon Resources - Kuskokwim Region	$55	$0	$0
Total		$407	$0	$0

[a] Approved as an out-of-cycle project by OSM.

Southwest Alaska stock status and trends projects funded in 2003.

Project #	Title	Cost ($000) 2003	2004	2005
00-032	Stock Assessment of Sockeye Salmon from the Buskin River	$58	$0	$0
01-095	Escapement Estimates and Population Monitoring of Lake Clark Sockeye Salmon	$77	$0	$0
03-043[a]	Estimation of Coho Salmon Escapement in Streams Adjacent to Perryville, Alaska Peninsula NWR	$0	$11	$11
03-046	Fisheries Biotechnician Training Program	$22	$0	$0
03-047	Stock Assessment of Afognak Lake Sockeye Salmon	$38	$0	$0
Total		$195	$11	$11

[a] Work will not start until October 2003, no funds projected for FY2003.

Southcentral Alaska stock status and trends projects funded in 2003.

Project #	Title	Cost ($000) 2003	2004	2005
00-013	Abundance and Run Timing of Adult Salmon in Tanada Creek; Evaluation of Lake Productivity of Tanada Lake	$60	$0	$0
03-001	Stock Status and Population Biology of the Copper River Steelhead	$61	$0	$0
03-033	Stock Assessment of Salmon in Billy's Hole Lake, Prince William Sound	$163	$80	$0
Total		$284	$80	$0

Southcentral Alaska harvest monitoring and traditional ecological knowledge projects funded in 2003.

Project #	Title	Cost ($000) 2003	2004	2005
03-010	GIS Atlas of Customary and Traditional Subsistence Fish Harvests in the Upper Copper River	$55	$0	$0
03-045	Cook Inlet Customary and Traditional Subsistence Fisheries Assessment	$110	$0	$0
Total		$165	$0	$0

Southeast Alaska stock status and trends projects funded in 2003.

Project #	Title	Cost ($000) 2003	2004	2005
01-125	Investigation Plan for Falls, Gut Bay, and Kutlaku Lakes (Kake Tri-Lake) Subsistence Sockeye Salmon Stock Escapement	$137	$0	$0
01-128[a]	Klag Bay Subsistence Sockeye Stock Assessment Project	$82	$0	$0
03-007	Eek Lake Sockeye Salmon Stock Assessment	$58	$0	$0
Total		$277	$0	$0

[a] The FRMP will fund one-half of the total cost of these projects in FY03. The remaining money will be provided by the Southeast Sustainable Salmon Fund.

	FY 2003		
Study	FRMP	SE SSF	TOTAL
01-125	$137.1	$138.0	$275.1
01-128	$81.5	$83.2	$164.7

Southeast Alaska harvest monitoring and traditional ecological knowledge projects funded in 2003.

Project #	Title	Cost ($000) 2003	2004	2005
01-105	Klawock River and Sarkar Lake Sockeye Salmon Harvest Use Patterns; Addition of *Prince of Wales Island Steelhead/Rainbow Trout Harvest Use Patterns* to Study	$40	$0	$0
Total		$40	$0	$0

2002 Fisheries Resource Monitoring Program

Number of projects funded for the 2002 Fisheries Resource Monitoring Plan. Project type includes stock status and trends (SST) and harvest monitoring and traditional ecological knowledge (HM-TEK).

Geographic Region	SST	HM-TEK	Total
Northern	1	3	4
Yukon River	4	4	8
Kuskokwim River	1	1	2
Southwest	2	2	4
Southcentral	1	3	4
Southeast	2	3	5
Inter-regional	1	1	2
Total	12	17	29

Cost of projects funded for the 2002 Fisheries Resource Monitoring Plan. Project type includes stock status and trends (SST) and harvest monitoring and traditional ecological knowledge (HM TEK).

	Cost ($000)		
Geographic Region	SST	HM-TEK	Total
Northern	$20	$182	$202
Yukon River	$252	$128	$379
Kuskokwim River	$177	$15	$192
Southwest	$68	$122	$191
Southcentral	$229	$98	$327
Southeast	$273	$151	$424
Inter Regional	$32	$28	$59
Total	$1,051	$723	$1,774

Northern Alaska stock status and trends projects funded in 2002.

		Cost ($000)		
Project #	Title	2002	2003	2004
02-020	Pitmiktalik River Salmon Counting Site Surveys	$20	$0	$0
Total		$20	$0	$0

Northern Alaska harvest monitoring and traditional ecological knowledge projects funded in 2002.

		Cost ($000)		
Project #	Title	2002	2003	2004
02-023	*Qaluich Nigingnaqtuat:* Fish That We Eat	$48	$0	$0
02-040	Traditional Ecological Knowledge of Whitefish in Kotzebue Sound	$66	$66	$0
02-050	Anaktuvuk Pass Subsistence Fish Harvest Assessment	$68	$67	$15
Total		$182	$133	$15

Yukon River region stock status and trends projects funded in 2002.

Project #	Title	Cost ($000) 2002	2003	2004
02-009	Technician Support for Pilot Station Sonar	$20	$0	$0
02-011	Delayed Mortality of Tagged Fall Chum Salmon	$45	$0	$0
02-097	Sex-ratios of Juvenile and Adult Chinook Salmon in the Kuskokwim and Yukon Rivers	$14	$12	$0
02-121	Run Timing, Migratory Patterns, and Harvest Information of Chinook Salmon Stocks within the Yukon River	$173	$228	$160
Total		$252	$240	$160

Yukon River region harvest monitoring and traditional ecological knowledge projects funded in 2002.

Project #	Title	Cost ($000) 2002	2003	2004
02-006	Monitoring Subsistence Harvest of Fishes from Old John Lake, Arctic Village	$47	$0	$0
02-037	Harvest Monitoring and Traditional Ecological Knowledge of Subsistence Non-Salmon Fish in the Lower Yukon River	$60	$150	$89
02-084	Review of Oral History Tapes on the Traditional Ecological Knowledge of Subsistence Harvests and Fishes, Old John Lake and Surrounding Water Bodies, Arctic Village, Alaska	$9	$0	$0
02-122	Inseason Subsistence Harvest Assessment of Yukon River Chinook and Chum Salmon	$12	$0	$0
Total		$128	$150	$89

Kuskokwim River region stock status and trends projects funded in 2002.

Project #	Title	Cost ($000) 2002	2003	2004
02-046	Kuskokwim River Chinook Salmon Stock Assessment	$177	$71	$92
Total		$177	$71	$92

Kuskokwim River region harvest monitoring and traditional ecological knowledge projects funded in 2002.

Project #	Title	Cost ($000) 2002	2003	2004
02-036	Aniak Area Subsistence Fishery Post-Season Harvest Surveys	$15	$0	$0
Total		$15	$0	$0

Southwest Alaska stock status and trends projects funded in 2002.

Project #	Title	Cost ($000) 2002	2003	2004
02-098	Estimate Coho Salmon Escapement and Carrying Capacity in the Kametalook River, Alaska Peninsula NWR	$24	$34	$27
02-099	Estimation of Late Run Sockeye and Coho Salmon Escapement in the Clark River, Alaska Peninsula NWR	$44	$29	$8
Total		$68	$63	$35

Southwest Alaska harvest monitoring and traditional ecological knowledge projects funded in 2002.

Project #	Title	Cost ($000) 2002	2003	2004
02-032	Subsistence Fisheries Harvest Assessment and Traditional Ecological Knowledge, Lower Alaska Peninsula and Aleutian Islands	$91	$64	$0
02-034	Subsistence Fisheries Assessment: Kvichak River Watershed Resident Species	$31	$43	$0
Total		$122	$107	$0

Southcentral Alaska stock status and trends projects funded in 2002.

Project #	Title	Cost ($000) 2002	2003	2004
02-015	Migratory Timing and Spawning Distribution of Chinook Salmon in the Copper River	$229	$185	$185
Total		$229	$185	$185

Southcentral Alaska harvest monitoring and traditional ecological knowledge projects funded in 2002.

Project #	Title	Cost ($000) 2002	2003	2004
02-028	Chugach Region Resource Data Layers as a Template for Traditional Ecological Knowledge Delineation	$58	$29	$29
02-075	Eulachon Subsistence Harvest Opportunities	$25	$25	$0
02-077	Increasing GIS Capabilities in the Upper Copper River	$15	$0	$0
Total		$98	$54	$29

Southeast Alaska stock status and trends projects funded in 2002.

Project #	Title	Cost ($000) 2002	2003	2004
02-012	Neva Creek Sockeye Salmon Stock Assessment and Restoration	$72	$76	$80
02-017	Redfish Bay/Tumakof Lake Sockeye Salmon Stock Assessment	$201	$192	$201
Total		$273	$268	$281

Southeast Alaska harvest monitoring and traditional ecological knowledge projects funded in 2002.

Project #	Title	Cost ($000) 2002	2003	2004
02-038	Southeast Alaska Subsistence GIS Database	$40	$40	$0
02-049	Wrangell Subsistence Salmon Harvest Use Pattern	$31	$34	$0
02-104	Hoonah and Klawock Salmon Survey s	$80	$25	$0
Total		$151	$99	$0

Alaska Interregional stock status and trends projects funded in 2002.

Project #	Title	Cost ($000) 2002	2003	2004
02-069	Develop Shared AYK Fishery Database	$32	$0	$0
Total		$32	$0	$0

Alaska Interregional harvest monitoring and traditional ecological knowledge projects funded in 2002.

Project #	Title	Cost ($000) 2002	2003	2004
02-043	Alaska Subsistence Fisheries Database GIS Integration	$28	$0	$0
Total		$28	$0	$0

2001 Fisheries Resource Monitoring Plan

Number of projects funded for the 2001 Fisheries Resource Monitoring Plan. Project type includes stock status and trends (SST) and harvest monitoring and traditional ecological knowledge (HM-TEK).

Geographic Region	SST	HM-TEK	Total
Northern	3	2	5
Yukon River	14	8	22
Kuskokwim River	9	9	18
Southwest	5	4	9
Southcentral	3	3	6
Southeast	6	4	10
Inter Regional	1	3	4
Total	41	33	74

Cost of projects funded for the 2001 Fisheries Resource Monitoring Plan. Project type includes stock status and trends (SST) and harvest monitoring and traditional ecological knowledge (HM-TEK).

	Cost ($000)		
Geographic Region	SST	HM-TEK	Total
Northern	$596	$169	$765
Yukon River	$1,094	$428	$1,522
Kuskokwim River	$1,462	$414	$1,876
Southwest	$564	$264	$828
Southcentral	$564	$166	$730
Southeast	$817	$198	$1,015
Inter Regional	$107	$456	$563
Total	$5,204	$2,095	$7,299

Northern Alaska stock status and trends projects funded in 2001.

Project #	Title	Cost ($000) 2001	2002	2003
01-113	Eastern North Slope Dolly Varden Genetic Stock Identification and Stock Assessment	$254	$463	$35
01-136 [a]	Northwestern Alaska Dolly Varden and Arctic Char Genetics	$123	$41	$0
01-137 [b]	Northwestern Alaska Dolly Varden Spawning Stock Assessment	$219	$341	$0
Total		$596	$845	$35

Northern Alaska harvest monitoring and traditional ecological knowledge projects funded in 2001.

Project #	Title	Cost ($000) 2001	2002	2003
01-101 [c]	Eastern North Slope (Kaktovik) Subsistence Fish Harvest	$134	$0	$0
01-224	Nome Sub-district Subsistence Salmon Survey	$35	$35	$0
Total		$169	$35	$0

[a] FY 2001 funding total includes support for two years of activity for the ADF&G portion and one year of activity for the USFWS portion of study 01-136. Actual budget will decrease with requested removal of work on Arctic char in lakes from this study.

[b] FY 2001 funding total includes full support for the first and partial support for the second year of activity.

[c] FY 2001 funding total includes support for two years of activity.

Yukon River region stock status and trends projects funded in 2001.

Project #	Title	Cost ($000) 2001	2002	2003
01-018	Pilot Station Sonar Technician Support	$13	$0	$0
01-026	East Fork Andreafsky River Weir	$31	$68	$0
01-029	Nulato River Weir	$21	$31	$31
01-032	Rampart Rapids Tagging Study	$100	$100	$100
01-038	Kateel River Weir	$125	$60	$25
01-048	Innoko River Drainage Weir Site Survey	$6	$0	$0
01-050	Kaltag Middle Yukon River Chinook Salmon Sampling	$1	$0	$0
01-058	East Fork Andreafsky River Weir Replacement Panels	$35	$0	$0
01-122	Lower Yukon Cooperative Salmon Drift Test Fishing	$134	$187	$33
01-140	Yukon Flats Northern Pike	$292	$55	$30
01-177	Rampart Rapids Tagging Extension I	$211	$170	$173
01-197	Rampart Rapids Summer CPUE Video Monitor	$36	$14	$14
01-200	Effects of *Ichthyophonus* Yukon River Chinook Salmon	$89	$88	$0
01-238 [a]	Working Group on Subsistence/Recreational User Conflicts in Grayling-Anvik-Shagaluk-Holy Cross (GASH) Area	$0	$17	$0
Total		$1,094	$790	$406

Yukon River region harvest monitoring and traditional ecological knowledge projects funded in 2001.

Project #	Title	Cost ($000) 2001	2002	2003
01-003	Traditional Ecological Knowledge of Old John Lake Near Arctic Village, Alaska	$52	$0	$0
01-011	Monitoring Subsistence Harvest of Fishes from Old John Lake, Arctic Village, Alaska	$33	$0	$0
01-014 [b]	Salmon Management Teleconferences	$11	$5	$5
01-015	Yukon River Salmon Traditional Ecological Knowledge	$53	$0	$0
01-100 [c]	Traditional Ecological Knowledge and Contemporary Subsistence Uses of Non-salmon Fish in the Koyukuk River	$205	$0	$0
01-199	Tanana Fisheries Conservation Outreach	$9	$9	$9
01-211	Upper Yukon, Porcupine, and Black River Salmon Traditional Ecological Knowledge Evaluation	$65	$0	$0
01-238 [a]	Working Group on Subsistence/Recreational User Conflicts in Grayling-Anvik-Shagaluk-Holy Cross (GASH) Area	$0	$17	$0
Total		$428	$31	$14

[a] Councils recommended using both stock status and trends funding and harvest monitoring and TEK funding from this region tc support a working group to resolve subsistence-recreational user conflicts in GASH area.

[b] 01-014 Approved as an out-of-cycle project by OSM.

[c] FY 2001 funding total includes support for three-years of activity.

Kuskokwim River region stock status and trends projects funded in 2001.

Project #	Title	Cost ($000) 2001	2002	2003
01-052	Whitefish Studies in Whitefish Lake	$147	$120	$128
01-053	Tuluksak River Weir	$200	$130	$138
01-070	Genetic Diversity of Kuskokwim Chinook Salmon	$125	$164	$10
01-086	Kuskokwim River Sonar Project Technician	$14	$14	$14
01-088 [a]	Natural Resource Internship Program	$97	$0	$0
01-116	Kuskokwim River Salmon Working Group Support	$21	$104	$0
01-117	Stock Assessment Research Capacity Building	$57	$98	$37
01-118	Kanektok River Weir	$123	$132	$130
01-141 [a,b]	Holitna River Salmon Escapement Monitoring	$678	$0	$0
Total		$1,462	$762	$457

Kuskokwim River region harvest monitoring and traditional ecological knowledge projects funded in 2001.

Project #	Title	Cost ($000) 2001	2002	2003
01-019	Four Sub-Regional Planning Session Meetings in the AVCP Region	$47	$0	$0
01-023	Upper Kuskokwim Inseason Subsistence Salmon Harvest Data and Chinook ASL Collection	$21	$31	$12
01-024	Bethel Area Post-Season Subsistence Salmon Harvest Household Surveys	$32	$32	$32
01-112	Aniak River Subsistence Fishery Studies	$66	$52	$0
01-132	Bethel Area In-season Subsistence Salmon Harvest Data Collection	$46	$55	$38
01-147	Survey of Sport Fisheries in the Aniak River	$114	$0	$0
01-225	Middle Kuskokwim Inseason Subsistence Salmon Data Collection	$47	$46	$38
01-226	Subsistence Fisheries Research Capacity Building	$32	$48	$0
01-235	Lake Minchumina, Telida, and Nikolai Community Fisheries Harvest Assessment Program	$9	$20	$0
Total		$414	$284	$120

[a] FY 2001 funding total includes support for three years of activity.

[b] Investigator added $25.0 per year to original study 01-141 budget for chum salmon monitoring at request of Technical Review Committee.

Southwest Alaska stock status and trends projects funded in 2001.

Project #	Title	Cost ($000) 2001	2002	2003
00-042 [a]	Population Assessment of Lake Clark Sockeye Salmon	$129	$0	$0
01-059	Estimation of Sockeye Salmon Escapement into McLees Lake, Unalaska Island	$89	$77	$81
01-095	Escapement Estimates for Lake Clark Sockeye Salmon	$117	$112	$0
01-204	Estimation of Coho Salmon Escapement in the Ugashik Lakes System, Alaska Peninsula Refuge	$108	$107	$111
01-206	Estimation of Sockeye and Coho Salmon Escapement in Mortenson Creek, Izembek National Wildlife Refuge	$121	$86	$84
Total		$564	$382	$276

Southwest Alaska harvest monitoring and traditional ecological knowledge projects funded in 2001.

Project #	Title	Cost ($000) 2001	2002	2003
01-047	Togiak River Subsistence Harvest Monitoring	$59	$45	$45
01-075	Collection of Traditional Ecological Knowledge on Sockeye Salmon Harvest Patterns in Nondalton, Alaska	$32	$0	$0
01-109	Traditions, Knowledge and Customs of the Alaska Peninsula/Becharof National Wildlife Refuge Complex and Naknek River Subsistence	$40	$70	$0
01-173 [b]	Harvest Assessment of the Recreational Fishery for Salmon in the Alagnak River	$133	$0	$0
Total		$264	$115	$45

[a] Approved for continued funding in FY 2001.

[b] FY 2001 funding total includes support for two years of activity.

Southcentral Alaska stock status and trends projects funded in 2001.

Project #	Title	Cost ($000) 2001	2002	2003
01-020	Feasibility of Monitoring Chinook Salmon Escapement in Copper River	$238	$299	$241
01-021	Develop Inseason Abundance Estimate in Lower Copper River	$158	$180	$172
01-148	Stock Status of Copper River Steelhead	$168	$129	$0
Total		$564	$608	$413

Southcentral Alaska harvest monitoring and traditional ecological knowledge projects funded in 2001.

Project #	Title	Cost ($000) 2001	2002	2003
01-035	Copper River Steelhead Harvest Monitoring	$9	$9	$9
01-110 [a]	Harvest and Use of Non-Salmon Fish in the Copper River	$121	$47	$39
01-217	Workshop to Build Capacity Among Copper River Groups	$36	$0	$0
Total		$166	$56	$48

[a] Study 01-096, Upper Copper River Drainage Mapping, was combined with study 01-110.

Southeast Alaska stock status and trends projects funded in 2001.

		Cost ($000)		
Project #	Title	2001	2002	2003
01-125	Gut, Kook, Hoktaheen Lakes Sockeye Salmon Escapement	$160	$141	$0
01-127	Thoms, Salmon Bay, Luck Lakes Sockeye Salmon Escapement Monitoring	$130	$115	$119
01-128	Klag Bay Sockeye Salmon Stock Assessment	$153	$149	$0
01-130	Hetta Lake Sockeye Salmon Stock Assessment	$72	$74	$78
01-175	Salmon Lake Sockeye and Coho Salmon Stock Assessment	$198	$152	$170
01-179	Virginia Lake Sockeye Salmon Escapement Monitoring	$104	$81	$87
Total		$817	$712	$454

Southeast Alaska harvest monitoring and traditional ecological knowledge projects funded in 2001.

		Cost ($000)		
Project #	Title	2001	2002	2003
01-091	East Alsek River Salmon Historical Use and Traditional/Local Knowledge	$25	$0	$0
01-103	Continuing Management and Development of Southeast Subsistence Fisheries GIS Database	$29	$0	$0
01-104	Kake Subsistence Sockeye Salmon Harvest Use Patterns	$71	$0	$0
01-105	Klawock River and Sarkar Lake Sockeye Salmon Harvest Use Patterns	$73	$0	$0
Total		$198	$0	$0

Alaska Interregional stock status and trends projects funded in 2001.

Project #	Title	Cost ($000) 2001	2002	2003
01-154	Fisheries Data Indentification and Access	$107	$0	$0
Total		$107	$0	$0

Alaska Interregional harvest monitoring and traditional ecological knowledge projects funded in 2001.

Project #	Title	Cost ($000) 2001	2002	2003
01-010	Regulatory History of Yukon-Kuskokwim Subsistence Salmon Fisheries Regulations	$33	$3	$0
01-106 [a]	Methods	$161	$0	$0
01-107 [a]	Implementation of Statewide Subsistence Fisheries Harvest Asssessment Strategy	$262	$0	$46
Total		$456	$3	$46

[a] FY 2001 funding total includes support for two years of activity.

2000 Fisheries Resource Monitoring Plan

Number of projects funded for the 2000 Fisheries Resource Monitoring Plan. Project type includes stock status and trends (SST) and harvest monitoring and traditional ecological knowledge (HM-TEK).

Geographic Region	SST	HM-TEK	Total
Northern	2	1	3
Yukon	9	2	11
Kuskokwim	6	2	8
Southwest	5	2	7
Southcentral	4	2	6
Southeast	2	2	4
Inter-regional	1	1	2
Total	29	12	41

Cost of projects funded for the 2000 Fisheries Resource Monitoring Plan. Project type includes stock status and trends (SST) and harvest monitoring and traditional ecological knowledge (HM-TEK).

	Cost ($000)		
Geographic Region	SST	HM-TEK	Total
Northern	$93	$70	$163
Yukon	$480	$69	$549
Kuskokwim	$301	$56	$357
Southwest	$177	$82	$259
Southcentral	$200	$210	$410
Southeast	$296	$198	$494
Inter-regional	$28	$207	$235
Total	$1,575	$892	$2,467

Northern Alaska stock status and trends projects funded in 2000.

		Cost ($000)		
Project #	Title	2000	2001	2002
00-001	NW Alaska Char Stock Identification	$51	$41	$0
00-002	E. North Slope Char Abundance and Distribution	$42	$0	$0
Total		$93	$41	$0

Northern Alaska harvest monitoring and traditional ecological knowledge projects funded in 2000.

		Cost ($000)		
Project #	Title	2000	2001	2002
00-020	Kotzebue Winter Sheefish Harvest	$70	$0	$0
Total		$70	$0	$0

2000 Fisheries Resource Monitoring Plan

Yukon River region stock status and trends projects funded in 2000.

Project #	Title	Cost ($000) 2000	2001	2002
00-003	Effects of *Ichthyophonus* on Chinook Salmon	$83	$0	$0
00-004	Humpback Whitefish/Beaver Interactions	$46	$0	$0
00-005	Tanana River - Upper Kantishna River Wheel	$12	$11	$0
00-018	Pilot Station Sonar Technology Upgrade and Study	$149	$163	$0
00-021	Dall River Northern Pike Studies	$24	$0	$0
00-022	Hooper Bay Test Fishing	$30	$27	$32
00-023	Humpback Whitefish in Upper Tanana	$60	$41	$41
00-024	Pilot Station Staff Support	$16	$0	$0
00-025	Henshaw Creek Salmon Weir	$60	$60	$60
Total		$480	$302	$133

Yukon River region harvest monitoring and traditional ecological knowledge projects funded in 2000.

Project #	Title	Cost ($000) 2000	2001	2002
00-006	Traditional Ecological Knowledge of Beaver/Whitefish Interactions	$39	$0	$0
00-026	Traditional Ecological Knowledge of Salmon and Other Fish in Circle and Eagle	$30	$0	$0
Total		$69	$0	$0

Kuskokwim River region stock status and trends projects funded in 2000.

Project #	Title	Cost ($000) 2000	2001	2002
00-007	Tatlawiksuk River Weir Operations	$30	$30	$30
00-019	Kwethluk River Weir	$205	$113	$117
00-027	Extend Goodnews River Weir Operations	$25	$25	$25
00-028	Extend Kanektok River Weir Operations	$3	$2	$0
00-029	Documentation/Communication on Floating Weirs	$11	$0	$0
00-030	Kuskokwim Salmon Project Site Surveys	$27	$0	$0
Total		$301	$170	$172

Kuskokwim River region harvest monitoring and traditional ecological knowledge projects funded in 2000.

Project #	Title	Cost ($000) 2000	2001	2002
00-008	Bethel Inseason Subsistence Harvest Data	$24	$0	$0
00-009	Bethel Postseason Harvest Monitoring	$32	$0	$0
Total		$56	$0	$0

Southwest Alaska stock status and trends projects funded in 2000.

Project #	Title	Cost ($000) 2000	2001	2002
00-010	Togiak River Salmon Weir	$16	$50	$50
00-011	Stock Identification of Togiak River Char	$27	$8	$0
00-031	Alagnak River Sockeye Salmon Escapement	$38	$119	$119
00-032	Sockeye Salmon Escapement in the Buskin River	$18	$90	$40
00-042	Population Assessment of Lake Clark Sockeye Salmon	$78	$0	$0
Total		$177	$267	$209

Southwest Alaska harvest monitoring and traditional ecological knowledge projects funded in 2000.

Project #	Title	Cost ($000) 2000	2001	2002
00-012	Traditional Ecological Knowledge of Fish in Bristol Bay Area	$40	$0	$0
00-033	Alagnak River Fishing Effort Estimates	$42	$0	$0
Total		$82	$0	$0

Southcentral Alaska stock status and trends projects funded in 2000.

		Cost ($000)		
Project #	Title	2000	2001	2002
00-013	Abundance/Timing of Salmon in Tanada Creek	$46	$45	$44
00-034	Miles Lake Sonar Improvement	$90	$0	$0
00-035	Extend Coghill Lake Escapement Weir Operations	$25	$26	$27
00-038	Extend Cooper Creek Weir	$39	$0	$0
Total		$200	$71	$71

Southcentral Alaska harvest monitoring and traditional ecological knowledge projects funded in 2000.

		Cost ($000)		
Project #	Title	2000	2001	2002
00-040	Copper River Subsistence Salmon Fishery Evaluation	$160	$0	$0
00-041	Eulachon Subsistence Use	$50	$62	$34
Total		$210	$62	$34

2000 Fisheries Resource Monitoring Plan

Southeast Alaska stock status and trends projects funded in 2000.

		Cost ($000)		
Project #	Title	2000	2001	2002
00-043	Klawock Lake Sockeye Salmon Stock Assessment	$164	$198	$208
00-044	Falls Lake Sockeye Salmon Stock Assessment	$132	$140	$146
Total		$296	$338	$354

Southeast Alaska harvest monitoring and traditional ecological knowledge projects funded in 2000.

		Cost ($000)		
Project #	Title	2000	2001	2002
00-015	Subsistence Fishery Database Development	$48	$0	$0
00-045	Traditional Subsistence Territory Mapping of Southeast Tribes	$150	$150	$150
Total		$198	$150	$150

Alaska Interregional stock status and trends projects funded in 2000.

		Cost ($000)		
Project #	Title	2000	2001	2002
00-016	Information Access of AYK Fishery Data	$28	$35	$0
Total		$28	$35	$0

Alaska Interregional harvest monitoring and traditional ecological knowledge projects funded in 2000.

		Cost ($000)		
Project #	Title	2000	2001	2002
00-017	Statewide Subsistence Harvest Strategy	$207	$0	$0
Total		$207	$0	$0

HB

20

<TARGET><BILL>HB 20</BILL><SUBJECT>HB
20</SUBJECT><COMM>HFSH27</COMM></TARGET>

ALASKA STATE LEGISLATURE

Co-Chair:
House Finance Committee

Chair:
House Finance Subcommittees for;
Department of Alaska Court System
Department of Public Safety
Department of Law

Member:
Legislative Council
Committee on Committees
Legislative Budget & Audit (alt)
House Finance Subcommittees for;
Governor's Office
Legislature
University of Alaska

BILL STOLTZE
STATE REPRESENTATIVE
Representative_Bill_Stoltze@legis.state.ak.us

Session:
Alaska State Capitol, Rm 515
Juneau, AK 99801-1182
Phone: (907) 465-4958
Fax: (907) 465-4928

District:
600 E. Railroad Ave.
Wasilla, AK 99654

Sponsor Statement

HB 20
An Act providing for a priority for a fishery that is restricted to residents when fishing restrictions are implemented to achieve a management goal

Insuring that residents have access to Alaska's fisheries resources is vitally important as we continue to grow as a state. Right now, user groups are growing both in size and number, splitting the allocation of our resources into smaller and smaller percentages. However, one thing all Alaskans can agree on is that we should have a priority over people coming from elsewhere in the country and the world to utilize and harvest our fisheries resources.

Fisheries that are restricted to residents only are meant to enable Alaskans to access their fisheries resources for their personal use and consumption. Currently, there are many personal use fisheries throughout the state. Excluding the priority that is already contained within statute for subsistence, HB 20 directs the Board of Fisheries to place restrictions on sport and commercial fisheries before putting restrictions on personal use fisheries when the harvest of a stock or species is limited to achieve an escapement goal.

I ask for your consideration and support of HB 20 so Alaskans can be assured that they will continue to have access to their fisheries resources to the benefit of themselves and their families.

FISCAL NOTE

STATE OF ALASKA
2011 LEGISLATIVE SESSION

Fiscal Note Number
Bill Version **HB 20 / A**
() Publish Date

Identifier (file name) HB 20-DFG-CO-03-11-11
Title Personal Use Fishing Priority
Sponsor Representative Stoltze and Keller, et.al
Requester House Fisheries Committee

Dept. Affected ADF&G
Appropriation Administration and Support
Allocation Commissioner's office
OMB Component Number 2175

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information					
OPERATING EXPENDITURES	**FY 2012**	**FY 2012**	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**
Personal Services							
Travel							
Services							
Commodities							
Capital Outlay							
Grants							
Miscellaneous							
TOTAL OPERATING	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
CAPITAL EXPENDITURES							
CHANGE IN REVENUES							

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts							
1003 GF Match							
1004 GF							
1005 GF/Program Receipts							
1037 GF/Mental Health							
Other (please identify)							
TOTAL	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Estimate of any current year (FY2011) cost

POSITIONS

Full-time							
Part-time							
Temporary							

Why this fiscal note differs from previous version (if initial version, please note as such)

Initial version of bill.

Prepared by Ben Mulligan, Legislative Liaison
Division Commissioner's Office
Approved by Kevin Brooks, Administrative Services Director
Department of Fish and Game

Phone 907-465-6184
Date/Time 3/11/2011 2:55PM
Date 3/11/2011

STATE OF ALASKA
2011 LEGISLATIVE SESSION

BILL NO. HB 20/A

Analysis

After consultation with the Division of Commercial Fisheries, Sport Fish Division, and Boards Support Section it was determined that the passage of this bill would not have a fiscal impact upon any of their programs and/or operations.

Sec. 16.05.251.
Regulations of the Board of Fisheries

(a) The Board of Fisheries may adopt regulations it considers advisable in accordance with AS 44.62 (Administrative Procedure Act) for

(1) setting apart fish reserve areas, refuges, and sanctuaries in the waters of the state over which it has jurisdiction, subject to the approval of the legislature;

(2) establishing open and closed seasons and areas for the taking of fish; if consistent with resource conservation and development goals, the board may adopt regulations establishing restricted seasons and areas necessary for

(A) persons 60 years of age and older to participate in sport, personal use, or subsistence fishing; or

(B) persons under 16 years of age to participate in sport fishing;

(3) setting quotas, bag limits, harvest levels, and sex and size limitations on the taking of fish;

(4) establishing the means and methods employed in the pursuit, capture, and transport of fish;

(5) establishing marking and identification requirements for means used in pursuit, capture, and transport of fish;

(6) classifying as commercial fish, sport fish, guided sport fish, personal use fish, subsistence fish, or predators or other categories essential for regulatory purposes;

(7) watershed and habitat improvement, and management, conservation, protection, use, disposal, propagation, and stocking of fish;

(8) investigating and determining the extent and effect of disease, predation, and competition among fish in the state, exercising control measures considered necessary to the resources of the state;

(9) prohibiting and regulating the live capture, possession, transport, or release of native or exotic fish or their eggs;

(10) establishing seasons, areas, quotas, and methods of harvest for aquatic plants;

(11) establishing the times and dates during which the issuance of fishing licenses, permits, and registrations and the transfer of permits and registrations between registration areas is allowed; however, this paragraph does not apply to permits issued or transferred under AS 16.43;

(12) regulating commercial, sport, guided sport, subsistence, and personal use fishing as needed for the conservation, development, and utilization of fisheries;

(13) requiring, in a fishery, observers on board fishing vessels, as defined in AS 16.05.475 (d), that are registered under the laws of the state, as defined in AS 16.05.475 (c), after making a written determination that an on-board observer program

(A) is the only practical data-gathering or enforcement mechanism for that fishery;

(B) will not unduly disrupt the fishery;

(C) can be conducted at a reasonable cost; and

(D) can be coordinated with observer programs of other agencies, including the National Marine Fisheries Service, North Pacific Fishery Management Council, and the International Pacific Halibut Commission;

(14) establishing nonexclusive, exclusive, and superexclusive registration and use areas for regulating commercial fishing;

(15) regulating resident or nonresident sport fishermen as needed for the conservation, development, and utilization of fishery resources;

(16) requiring unlicensed fishing vessels present in or transiting the waters of the state to report to the department the quantity, species, and origin of fish on board; in this paragraph, "unlicensed fishing vessel" means a fishing vessel that is not licensed under AS 16.05.490 - 16.05.530;

(17) promoting fishing and preserving the heritage of fishing in the state.

(b) *[Repealed, Sec. 12 ch 52 SLA 1986].*

(c) If the Board of Fisheries denies a petition or proposal to amend, adopt, or repeal a regulation, the board, on receiving a written request from the sponsor of the petition or proposal, shall in addition to the requirements of AS 44.62.230 provide a written explanation for the denial to the sponsor not later than 30 days

after the board has officially met and denied the sponsor's petition or proposal, or 30 days after receiving the request for an explanation, whichever is later.

(d) Regulations adopted under (a) of this section must, consistent with sustained yield and the provisions of AS 16.05.258, provide a fair and reasonable opportunity for the taking of fishery resources by personal use, sport, and commercial fishermen.

(e) The Board of Fisheries may allocate fishery resources among personal use, sport, guided sport, and commercial fisheries. The board shall adopt criteria for the allocation of fishery resources and shall use the criteria as appropriate to particular allocation decisions. The criteria may include factors such as

(1) the history of each personal use, sport, guided sport, and commercial fishery;

(2) the number of residents and nonresidents who have participated in each fishery in the past and the number of residents and nonresidents who can reasonably be expected to participate in the future;

(3) the importance of each fishery for providing residents the opportunity to obtain fish for personal and family consumption;

(4) the availability of alternative fisheries resources;

(5) the importance of each fishery to the economy of the state;

(6) the importance of each fishery to the economy of the region and local area in which the fishery is located;

(7) the importance of each fishery in providing recreational opportunities for residents and nonresidents.

(f) Except as expressly provided in AS 16.40.120 (e) and 16.40.130, the Board of Fisheries may not adopt regulations or take action regarding the issuance, denial, or conditioning of a permit under AS 16.40.100 or 16.40.120, the construction or operation of a farm or hatchery required to have a permit under AS 16.40.100, or a harvest with a permit issued under AS 16.40.120.

(g) The Board of Fisheries shall consider a request of the commissioner for approval of a petition to the Alaska Commercial Fisheries Entry Commission to establish a moratorium on new entrants into a commercial fishery under AS 16.43.225 at the board's next regular or special meeting that follows the receipt by the board of the request for approval of the petition and that allows time for the notice required under this subsection. The board may consider the request of the commissioner for approval of the petition only after 15 days' public notice of the board's intention to consider approval of the petition. The board shall consider whether the commissioner, in support of the request for approval of the petition, has adequately shown that the fishery meets requirements for a moratorium on new entrants under AS 16.05.050. The board by a majority vote of its members at the meeting when the petition must be considered shall approve or disapprove the petition.

(h) The Board of Fisheries shall adopt by regulation a policy for the management of mixed stock fisheries. The policy shall provide for the management of mixed stock fisheries in a manner that is consistent with sustained yield of wild fish stocks.

(i) Notwithstanding AS 16.43.140 (c)(5), the board may adopt, at a regularly scheduled meeting at which the board considers regulatory proposals for management of a specific salmon fishery, a regulation to allow a person who holds two entry permits for that salmon fishery an additional fishing opportunity appropriate for that particular fishery.

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(j) Except as provided by AS16.05.258, when the harvest of a stock of species is limited to achieve a management goal, the Board of Fisheries shall place restrictions on all other fisheries before restricting personal use fisheries. In this subsection, "management goal" means the escapement of estimated population size of the exploited stock that provides the greatest potential for sustained yield as established by the board.



January 27, 2011

Dear Alaska State Representative,

We, the Board of Directors for the Chitina Dipnetters Association, representing the thousands of families that partake in the Copper River Dipnet Fishery, respectfully request your support of House Bill 20, sponsored by Representatives Stoltze, Keller, Neuman, and Johnson and co-sponsored by Representative Thompson. This no-nonsense, simplistic bill is about putting the needs of Alaskans first and ensuring our rights to feed our families, with fish from our rivers.

Article VIII of our Alaska State Constitution was written explicitly to ensure that our natural resources are managed as a public trust. It clearly states that our *"fish, wildlife, and waters are reserved to the people for common use"* and that they shall be managed *"for the maximum benefit of its people"*. House Bill 20 will better ensure that fisheries management is in alignment with our State Constitution and it will also help the Alaska Department of Fish and Game manage our fishery resources *"for the maximum benefit of its people"*.

You will hear a great amount of opposition to this Bill from the commercial fishing industry, as seen when this Bill was submitted as HB266 during last year's legislative session. Much of the written testimony from the commercial fishing industry opposing that Bill centered on how *"personal use and the commercial fleet should share restrictions to meet escapement goals"* and that we *"must share equally in the burden of conservation"*.[1] We strongly encourage you to educate yourself on the current allocation rates if you have not done so already. Commercial fishing fleets of the Copper River Fishery for example, take nearly 90% of our harvested salmon. In comparison, personal use fishermen, and their families, representing the largest user group, take only 7% of total harvest from this same fishery. Calls to restrict the ability of Alaskans to feed their families are untenable and nonsensical under the current allocation regime.

HB20 is a "no-brainer". It is a common sense solution to ending the allocation conflicts between commercial fishing interests and Alaskans choosing to feed their families with fish they harvest themselves. Please, do what is right for Alaska *and* Alaskans and support HB20.

Thank you for your time and efforts representing Alaskans.

The Chitina Dipnetters Association, Board of Directors
1002 Pioneer Rd.
Fairbanks AK 99701-2818

[1] (http://housemajority.org/spon.php?id=26hb266 and Additional Public Comments on Subsistence Finding Standard and Chitina Dipnet Fishery March 16-21, Hilton Hotel Anchorage).

Petersburg Vessel Owners Association

PO Box 232
Petersburg, AK 99833
Phone & Fax: 907.772.9323
pvoa@gci.net • www.pvoaonline.org

March 7, 2011

Representative Steve Thompson
Chair, House Committee on Fisheries
State Capitol, Room 428
Juneau, AK 99801-1182
Via email: Representative_Steve_Thompson@legis.state.ak.us

RE: HB 20- PERSONAL USE FISHING PRIORITY, OPPOSE

Dear Representative Thompson and House Fisheries members,

Petersburg Vessel Owners Association (PVOA) appreciates the opportunity to comment on HB 20 Personal Use Fishing Priority. PVOA is a diverse group of 100 commercial fishermen and businesses operating primarily in Southeast Alaska. Our members provide millions of meals to the public annually by participating in a variety of fisheries statewide including salmon, herring, halibut, cod, crab, blackcod, shrimp, and dive fisheries. Many PVOA members are also active sport, personal use, and subsistence fishermen who depend on sustainable and conservative management of Alaska's fishing resources to ensure healthy fisheries for the future.

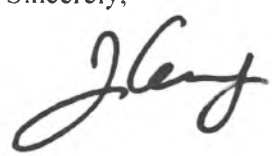
It is our understanding that HB 20 as introduced would mandate a Legislative personal use fishing priority after subsistence. As active participants in the fisheries management process including the Board of Fisheries (BOF), we are OPPOSED to any action that would take away the ability of the BOF and the Alaska Department of Fish and Game (ADF&G) to effectively manage Alaska's fisheries resources. Alaska is the poster-child for sustainability and fisheries management. Any actions that erode or eliminate the ability of the BOF or ADF&G to effectively manage our sport, personal use, subsistence, and commercial fisheries should be opposed.

Careful consideration is urged when placing any priority on Alaska's fisheries resources. Our commercial and sport fisheries are both viable and culturally significant to Alaska. Commercial fishing is Alaska's largest private sector employer, and third in revenue generated behind oil/gas and Federal Government. Commercial fishermen not only support their families and community, but also provide most Alaskans with access to the resource.

Although decisions made by the BOF may not always be popular, it is extremely important that the public process with input provided by all user groups is protected. As per the Alaska Constitution, with only subsistence harvest taking priority, we are ensuring that the sport, personal use, and commercial fisheries *all* share in the burden of conservation of Alaska's fisheries resources.

In closing, we urge the House Fisheries Committee to support the public BOF process and the sound management ability of ADF&G by opposing HB 20. Thank you for your time and dedication to Alaska's fishery resources. If we can provide further information or answer any questions as you make this important decision, please feel free to contact us.

Sincerely,



Julianne Curry
Director

Bill Black
309 Observation Avenue
P.O. Box 204
Cordova, Alaska
99574
salmonbill@comcast.net

February 10, 2011

Dear Chairman Steve Thompson and the Fisheries Special Committee,

I've fished commercially Area E, the Copper River-Prince William Sound area, since 1971 and primarily for salmon. The positive advances in Area E made by the commercial fishing sector during that time, even with a few setbacks (primarily the Exxon Valdez), have been amazing. When I began fishing in 1971 neither the Prince William Sound Aquaculture Corporation nor the Valdez Fisheries Development Association existed. Both of these commercial fisher originated and driven organizations have been instrumental in vastly increasing harvest levels for ALL users whether they be subsistence, sport, personal use or commercial.

I write to you today to register my advice that House Bill 20, submitted by Representative Stoltze, is a bad idea. As you are aware and currently the only user group that has a priority is subsistence. The other user groups are on equal footing. This is as fair as it can be and as realistically manageable as it can be. House Bill 20 would upset that important equilibrium.

There are many Alaskan families engaged in the family business of commercial fishing who are looking to the leadership of our great state, which you are, to help keep our fisheries vital, strong and thriving for everyone. Please reject HB 20.

Bill Black

From: Mikal Berry [mikalberry@gmail.com]
Sent: Tuesday, February 01, 2011 11:52 AM
To: Jomo Stewart
Subject: HB 20

Dear Mr. Stewart

I would appreciate it if you would pass on my comments directed toward HB 20 to the "Fisheries Special Committee" asI tried to get into the POM website but was unable to do so .....

I have worked in the Cordova AK fishery since 1993. I have also volunteered in our local organizations that sustain and promote thousands of returning salmon, each year, for use by all.
The subsistence, sports, personal use & commercial user groups all share the bountiful harvest that PWSAC provides in Prince William Sound and the Copper River.
We, the commercial user group, pay for this corporation with 2% of our gross fishing income, collected by the State of Alaska each season.

The only user group that has a priority is subsistence.
In times of fishing restrictions subsistence is the only user group not limited.
HB 20 changes this balance, it wants to give a priority to the "personal use" user group.
I am in direct opposition to this plan. HB 20 is basically the mirror image of last year's HB 266 (submitted by the same State Reprensentative), HB 266 did not achieved enough support, so Rep. Stoltze is back again with a new bill. HB 20 does nothing to improve relations between the fisher user groups, it in fact, pits one against another.
Thank you for your consideration.
Best,
Mikal Berry
POB 1032
Cordova Alaska 99574
907-424-5251
miklaberry@gmail.com

UNITED FISHERMEN OF ALASKA

211 Fourth Street, Suite 110
Juneau, Alaska 99801-1172
(907) 586-2820
(907) 463-2545 Fax
E-Mail: ufa@ufa-fish.org
www.ufa-fish.org

March 15, 2011

Representative Steve Thompson, Chairman
House Special Committee on Fisheries
Alaska State Legislature
State Capitol, 120 Fourth Street
Juneau, AK 99801-1182

Dear Chairman Thompson and Committee Members,

United Fishermen of Alaska opposes HB 20.

United Fishermen of Alaska (UFA) represents 38 Alaska Commercial fishing organizations, and hundreds of individual fishermen and related businesses.

Fisheries management in Alaska is renowned throughout the world for its emphasis on sustainability. While most of the world long ago lost their historic runs of wild salmon, Alaska shows a remarkable history of restoring salmon runs throughout the state, after a long period of decline during the period before Alaska gained statehood.

Among the most important tools that have helped Alaska restore and retain healthy salmon populations are the Board of Fisheries process by which allocative actions are made on a case by case basis based on science and public input, and real time management by the Department of Fish and Game based on scientifically established escapement goal ranges.

Alaska's constitutional mandate to manage fisheries for the maximum benefit of its citizens requires careful consideration of the range of benefits that fisheries provide, including nutritional needs, history and usage by residents and non residents, importance to the economy of the state, region and local area, and recreational opportunity. These factors are considered for each regulatory proposal in the deliberative process of the Board of Fisheries, as well as management decisions of the Department of Fish and Game.

We strongly caution against creating a priority for personal use fisheries, because it will shift allocation and opportunity away from commercial fisheries that provide income to state and local governments, to fisheries that do not. It also would increase the perception of "entitlement" by Alaska residents to fisheries resources that are limited by nature.

Personal use fisheries are open to all Alaska residents, with only the requirement to hold a resident sport fishing license. As the population grows in one area of the state, the perceived entitlement to fisheries resources in other areas of the state that have established personal use fisheries pits one region against another.

The intent by the Board of Fisheries in establishing Personal Use fisheries is clear in 5 AAC 77.001 (4) (b): "...allowed when that taking does not jeopardize the sustained yield of a resource and either does not negatively impact an existing resource use or is in the broad public interest." Since that time in 1981, we see extreme population growth primarily in one area of the state, and we can expect this to continue. We currently have 95 personal use fisheries that have been established throughout the state that are open to all residents. If HB 20 were to pass and establish a priority for the Personal Use fisheries over other uses (besides Subsistence), the growth of one region of the state will have detrimental impacts on other regions and historical patterns of use.

We are also concerned that such a priority would handcuff the Board of Fisheries and Department of Fish and Game in the ability to allocate and manage fisheries, and leave many allocative and management decisions open to lawsuit based on a perception of interference with a Personal Use fishery.

If Alaska is going to avoid the decline of salmon runs as has occurred elsewhere, we need to avoid the pattern of fighting over the fish, pitting one region or user group against another, while industrial development and population eliminate one stream or run at a time until the fish are gone.

We strongly urge this committee, and the Alaska State Legislature, to leave the prioritization of fishery allocations within the Board of Fisheries, and the management within the Department of Fish and Game, and reject HB 20.

Sincerely,

Mark Vinsel
Executive Director

From: ALAN T. CROOKSTON [alancrookston@me.com]
Sent: Tuesday, February 01, 2011 11:53 AM
To: Jomo Stewart
Cc: Jomo Stewart
Subject: Re: OPPOSE HB 20

Dear Decision Makers,

OPPOSE HB 20.

I have been on the Kenai Penisula since I was born.

I and have seen the gammit of "personal use" fishing; from guys picking fish in conoes to Ford Broncos getting stuck in front of incoming tides (while trying to pull nets in) and the list could go on.

I have seen residents and NON-residents selling their PU fish online, in Newpapers, freezing it shipping to extended family out of state, donating it organizations, offering it as a "tourist attraction," or simply letting hundreds of fish go to waist (caught too many - oops), again the list could go on.

This is a world Natural Resource that lies within the Borders of the USA. It feeds and sustains millions, and therefore must be managed (legislated) with justice and the best science available. Based on previous years, Resident Personal Use Priority has seriously lacked in professional management and scientific data to sustain this viable Natural Resource. Its levels of efective harvest ability are more drastic than the fishtraps of old due to their location, and the popularity (and abuse).

I strong urge you to OPPOSE HB 20.

Thank you,

Alan T. Crookston

From: James Mykland [jl_mykland@yahoo.com]
Sent: Monday, January 31, 2011 6:38 AM
To: Jomo Stewart
Subject: Opposition to HB 20

To Jomo Stewart,
Please pass on my comments directed toward HB 20 to the "Fisheries Special Committee:

I have been a commercial fisher, based out of Cordova, AK, since 1976. I am proud to be part of the Prince William Sound Aquaculture Corporation, that provides for thousands of returning salmon, each year, for use by all fishery user groups of Alaska. The subsistence, sports, personal use & commercial user groups all share in the bountiful harvest that PWSAC provides in Prince William Sound and the Copper River. We, the commercial user group, pay for this corporation with 2% of our gross fishing income, collected by the State of Alaska each season.

The only user group that has a priority is subsistence. In times of fishing restrictions they are the only ones not limited. That is the way that needs to be maintained. HB 20 changes the status quo, it wants to give a priority to the "personal use" user group. I am in direct opposition to this plan. HB 20 is basically the mirror image of last year's HB 266 (submitted by the same State Reprensentative), HB 266 did not achieved enough support, so Rep. Stoltze is back again with a new bill. HB 20 does nothing to improve relations between the fisher user groups, it in fact pits one against another.

Thank you for your consideration,

James Mykland

PO Box1241
Cordova, AK 99574
907 903 8251

Southeast Alaska Fishermen's Alliance
9369 North Douglas Highway
Juneau, AK 99801
Phone: 907-586-6652 Email: seafa@gci.net
Fax: 907-523-1168 Website: http://www.seafa.org



February 18, 2011

Alaska State Legislature
House Fisheries Committee
Representative Steve Thompson, Chair
State Capitol
Juneau, AK 99811

RE: Oppose HB 20

Representative Steve Thompson, Chair and Fisheries Committee Members,

Southeast Alaska Fishermen's Alliance (SEAFA) appreciates this opportunity to express our concerns regarding HB 20 which mandates a personal use priority after subsistence. Our association is comprised of 85% Alaskan residents, who participate in personal use and sport fisheries in addition to their commercial fishing livelihood. Southeast Alaska Fishermen's Alliance has always supported the importance of personal use fisheries to the residents of the State of Alaska as is evidenced by our testimonies to the Board of Fish. However, personal use fisheries also need to have limits and share in the burden of conservation along with commercial and sport fishermen.

This legislation as written is flawed. The subsistence priority statute AS 16.05.258 (f) clearly states that the subsistence priority is to provide for a reasonable opportunity. This legislative language mandates development of a personal use priority without any qualification. Further, it does not provide language, as the subsistence priority does, to share the resources with other users. As the Alaska population continues to grow, the language as written will ultimately close commercial and sport fisheries, regardless of the economic harm to the state or local communities, without any express concern over conservation in order to provide a personal use priority.

This legislation as written severely ties the hands of the Board of Fish preventing there ability to fulfill the obligations listed in AS 16.05.251. This legislation contradicts with the allocation criteria between commercial, sport and

personal use fisheries As written this legislation creates an elevated right for personal use fishermen, which can very easily be used in court to challenge any allocations that the Board of Fisheries makes in which they feel any restrictions at all during any part of the lifecycle. Clearly this violates fundamental precepts embedded in the Alaska Constitution, regarding Uniform Application, and Common Use.

Does this legislation even allow the Board of Fish to set limits or develop management plans that include the personal use fisheries?

At what point can management decisions affect the personal use fishermen and still allow commercial and sport fisheries to exist?

Would ADFG have to stand by and allow a system to fail to meet their management target because a commercial fishery had an opening so therefore the personal use fishery could not be restricted? In many fisheries it is not possible to allow a commercial fishery to wait until escapement is met and all personal use needs are met because by then the fish have swam past the point a commercial fishery can be conducted. Do we in these situations in order to provide for a personal use priority, forgo economic opportunity and close the commercial and sport fisheries? The current State of Alaska management system is considered superior to all other regions due to the public process through the board of fish and the end mandate for maximum sustained yield provided for in the State Constitution. Are we now going to ignore what has worked and take away the Board of Fish authority to allocate and ADFG flexibility to manage the resource in real time allowing for all users to share in the burden of conservation?

Commercial fishing is an important industry to the State of Alaska ranking third behind Oil & Gas and Federal Government in generating basic economic activity in **Alaska with a total economic contribution of $5.8 billion to Alaska's economic output and over 78,000 jobs in 2007. In addition, the raw fish taxes paid into the general fund and shared with the local coastal communities are critical to their economy.**

For many residents of coastal Alaska, their only access to our sustainable fishery resources to provide healthy protein to their diet is through the commercial fishery. Is it fair to take away their primary access?

There are allegedly businesses being built to supply, outfit and provide transportation for personal use fisheries. This seems to be in conflict with the original intent during development of the personal use fishery.. We believe the original intent of the personal use fishery was to allow Alaskans access to fishery

resources in a non-subsistence areas, or access to fisheries with negative C&T findings by providing differential bag limits than non-residents, because it was acknowledged that in many cases these Alaskans were using the resource to provide for their own family consumption.

Thank you for this opportunity to testify on this legislation. If you have any questions about our testimony or points raised in the testimony, please contact the office, we would be glad to provide additional information.

Sincerely,



Kathy Hansen
Executive Director

From: jeff phillips [jdpcordova@hotmail.com]
Sent: Saturday, February 05, 2011 5:36 AM
To: Jomo Stewart
Subject: HB20

Dear Sir:

I am writing to state my opposition to HB20 which swould give personal use fisheries priority in times of low fish numbers. I am a commercial fisherman and longtime resident of Cordova. This bill would greatly harm my fishing business. Priority is and always has been a status for subsistence users. It should remain that way. That priority is meant to protect a way of life. Allowing personal use priority protects a way of "sport".

I am asking that HB20 be defeated.

Thank you.

Jeff Phillips
Cordova, Alaska

From: Ted Crookston [tedcrookston@me.com]
Sent: Monday, January 31, 2011 10:02 PM
To: Jomo Stewart
Subject: OPPOSE HB 20

OPPOSE HB 20

I am a resident of Kenai and have observed the evolution of the Personal Use Fishery from the "temporary biologically necessary" measure that is was in 1989 because of the closure of the inlet due to the Exxon Valdez Oil Spill to the uncontrolled mania that it is now.

This measure—seeking a Resident Personal Use Priority above all other user groups is the EPITOME OF THE ENTITLEMENT MENTALITY.

All user groups bear the same responsibility and obligation to support the ADF&G in achieving the Escapement Goals to assure the future sustainability of the fishery.

This measure has rightfully been defeated repeatedly in the past and should be again.

I urge you to OPPOSE HB 20.

Ted Crookston
Kenai, AK

From: Paul Crookston [pjcrookston@me.com]

Sent: Tuesday, February 01, 2011 11:19 AM

To: Jomo Stewart

Subject: Oppose HB 20

I am a resident of Kenai and I have observed and know of many abuses of the personal use fishery on the Kenai River. Legislation like his would only add to this problem and add to the unchecked madness that is the dip-net fishery. All user groups need to share in any fishing restrictions to achieve optimal sustained yield for the fishery.

From: Norm [galeforce@mtaonline.net]
Sent: Monday, January 31, 2011 1:59 PM
To: Jomo Stewart
Subject: HB20

Mr. Stewart,

I am vehemently against HB20.this is the same bill that Mr.Stoltz tried to pass last year as HB266.It was voted on and failed unanimously by the Board of Fish.it was a bad Bill then and is a bad Bill now.I would hope Mr. Stoltz would quit wasteing yours and my time with this Bill.

Thank You,

Norm Campbell
Big Lake,Alaska

HB

59

<TARGET><BILL>HB 59</BILL><SUBJECT>HB
59</SUBJECT><COMM>HFSH27</COMM></TARGET>

Alaska State Legislature

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REPRESENTATIVE Paul Seaton

District 35

HB 59
Alaska Manufacture preference

To be eligible for the rate reduction under HB 59 at least 50% of borrower's purchases with the loan fund have to be manufactured in the State of Alaska. The definition of manufacture is "processing, developing, or making an item into a new item with a distinct character and use."

HB 59 allows the Department of Commerce Community and Economic Development to give Commercial Fishing Loan Fund borrowers a reduction in the interest rate on their loan if 50% of the loan is spent on a product produced or manufactured in the State of Alaska. The Commercial Fishing Loan Fund was created by the State of Alaska to aid commercial fishermen in securing new equipment, quota shares and upgrades to their vessels. The Department already allows reductions in interest rates for borrowers who pay on time, make engine and fuel efficiency upgrades or product quality improvements.

HB 59 does not make the rate reduction mandatory because the Department needs to have the discretion to institute it when the market allows. For example, in today's market the interest rates are so low, if the Department were required to issue the interest rate discount it would create a loss for the fund.

HB 59 promotes economic development in Alaska by encouraging Alaska fisherman to purchase equipment manufactured in the State of Alaska when using Commercial Fishing Loan Fund dollars.

Prepared by the office of Rep. Seaton
HB 59v.A
1-28-2011

FISCAL NOTE

STATE OF ALASKA
2011 LEGISLATIVE SESSION

Fiscal Note Number
Bill Version
() Publish Date

Identifier (file name) HB059-CCED-DED-02-04-11
Title: Commerical Fishing Act
Sponsor: Representative Seaton
Requester: House Fisheries

Dept. Affected: DCCED
Appropriation: Economic Development
Allocation: Economic Development
OMB Component Number: 801

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information					
OPERATING EXPENDITURES	**FY 2012**	**FY 2012**	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**
Personal Services	0.0		0.0	0.0	0.0	0.0	0.0
Travel							
Services							
Commodities							
Capital Outlay							
Grants							
Miscellaneous (Fund Capitalization)							
TOTAL OPERATING	**0.0**		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
CAPITAL EXPENDITURES							
CHANGE IN REVENUES	**0.0**		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts							
1003 GF Match							
1004 GF							
1005 GF/Program Receipts							
1037 GF/Mental Health							
Alaska Small Business RLF Program	0.0		0.0	0.0	0.0	0.0	0.0
TOTAL	**0.0**		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Estimate of any current year (FY2011) cost

POSITIONS

Full-time	**0.0**		0	0	0	0	0
Part-time							
Temporary							

Why this fiscal note differs from previous version (if initial version, please note as such)

Prepared by: Cathy Jeans, Acting Operations Manager — Phone: 465-2728
Division: Economic Development — Date/Time: 2/5/11 6:00 PM
Approved by: Susan K. Bell, Commissioner — Date: 2/5/2011
Commerce, Community and Economic Development

(Revised 1/27/2011 OMB)

FISCAL NOTE

STATE OF ALASKA
2011 LEGISLATIVE SESSION

BILL NO. _____

Analysis

This legislation would amend the Commerical Fishing Revolving Loan Fund to allow the Department of Commerce, Community and Economic Development (DCCED) to provide an interest rate reduction to applicants obtaining loans for the purpose of energy efficiency upgrades or product quality improvments that are manufactured in Alaska.

DCCED does not anticipate a significant fiscal impact over the next six years as a result of this legislation.

Alaska State Legislature

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REPRESENTATIVE Paul Seaton

District 35

Common Questions on HB 59

How would the Division of Economic Development determine whether or not a product is manufactured in the state of Alaska?

The legislation states that in order for a borrower to be eligible for the rate reduction "at least 50 percent of the loan proceeds" need to be spent on a product that is manufactured or produced in the state (p.1, l.8). As long as half of the money borrowed is spent on an Alaskan product, the entire loan in eligible for the rate reduction. The Department would have vendors certify their product under the Made in Alaska and Alaska Product Preference programs (see email from Cathy Jeans).

Mary Ellen, AG for the Department of Commerce, Community and Economic Development, is confident that the language in the bill is clear enough for the Department to administer and that any further definitions can be dealt with in regulations. The language defining Alaska Manufacture in the bill came from the State Procurement statutes, AS 36.30.332 and 338.

Can you clarify the definition of manufacture?

HB 59 states " 'manufactured or produced' means processing, developing, or making an item into a new item with a distinct character and use." (p.1 l.13-14) Merely assembling a product from a kit would not be making a product with a new and distinct purpose. However, taking various parts – pieces of pipe, steel and wire – and making a new distinct product would be considered a product manufactured in Alaska. The Department would require the borrower to prove the product was manufactured in Alaska by presenting a statement from the Alaskan company before they would be eligible.

Hypothetical borrowing situations:

Under the Product Quality Program:
A fisherman borrows $40,000 under the Product Quality Program. They purchase an Alaskan made refrigeration unit for $30,000 and spend $10,000 to install it. Seventy-five percent of the loan is spent on an Alaska manufactured product, which makes the entire $40,000 loan eligible for a rate reduction under HB59.

Under the Engine Efficiency Program:
A fisherman borrows $20,000 under the Engine Efficiency Program. They purchase an Alaskan made marine electrical generator for $14,000 and spend $6,000 to install it. Seventy percent of the loan is spent on an Alaska manufactured product, which makes the entire $20,000 loan eligible for a rate reduction under HB59.

Staff contact: Katie Koester, 465-2028

Prepared by the office of Rep. Seaton
Updated 2-1-2011

Katie Koester

From: Jeans, Cathy (CED) [cathy.jeans@alaska.gov]
Sent: Monday, January 31, 2011 3:06 PM
To: Katie Koester
Cc: Ayers, Wanetta Jo (CED); Andersen, Jim (CED)
Subject: RE: common questions on HB59

Categories: Katie

Hi Katie, I met with our director and senior management staff to discuss the first question listed in your "response to questions for house finance" document. The question was: How would the Division of Economic Development determine whether or not a product is manufactured in the state of Alaska? We discussed that an expedient way to deal with the question of Alaskan manufactured products would be to have the vendors certify their products with the Made in Alaska and Alaska Product Preference programs to meet the requirement. It appears that the processes already in place for these programs may mirror the intent of this legislation.

We thought the following definitions for the Made in Alaska and Alaska Product Preference programs and their respective websites would be helpful. Please let us know if you have additional questions. Thank you. Cathy

Made In Alaska - http://www.commerce.state.ak.us/ded/dev/mia/permit.htm

Certification Requirements
A finished product that is only partially manufactured within the state may be authorized to use the MADE IN ALASKA emblem if:

- the producer demonstrates that no manufacturing facility exists in the state with the capacity or expertise to do the work being accomplished outside the state; the commissioner or MADE IN ALASKA agent will not consider cost alone as a valid justification for using out-of-state manufacturing facilities; and
- the majority of the value-added processes are accomplished in the state.

DEFINITIONS

(3) "manufactured product" means a product that is built, formed, fabricated, or assembled from a raw or semi-finished material which is changed in character in the final product;
(4) "product line" means a product or group of products that is manufactured utilizing similar materials and manufacturing processes and producing a finished product that is similar in form, content, and use;
(5) "value-added process" means a process that changes a raw material or a basic industrial material into a more finished product or alters the function, shape or appearance resulting in a product with increased value.

Alaska Product Preference - http://www.commerce.state.ak.us/ded/dev/prodpref/prodpref.htm

Product Certification

To be certified as Alaska Product Preference, a product must be made with materials and supplies that are:

1. 25 percent or more and less than 50 percent produced and/or manufactured in state. This is **Class I,** and receives 3% bid preference;
2. 50 percent or more and less than 75 percent produced and/or manufactured in state. This is **Class II**, and receives 5% bid preference;
3. 75 percent or more produced and/or manufactured in state. This is **Class III**, and receives 7% bid preference.

Please note that the certification in the State's preference programs goes to the products and not to the manufacturer.

Per AS 36.30.338, the following **definitions** are used:

1. "Alaska product" means a product of which not less than 25 percent of the value, as determined in accordance with regulations adopted under AS 36.30.332(a), has been added by manufacturing or production in the state;
2. "produced or manufactured" means processing, developing, or making an item into a new item with a distinct character and use through the application within the state of materials, labor, skill, or other services;
3. "product" means materials or supplies but *does not include gravel and asphalt* .

Commercial Fishing Loan Fund

Loan Program Goal and Objectives

To provide long-term, low interest loans to promote the development of predominantly resident fisheries, and continued maintenance of commercial fishing vessels and gear for the purpose of improving the quality of Alaska seafood products.

General Requirements

- Alaska resident for the past 2 years.
- Child support payments must not be past due.
- Provide a copy of each applicant's valid government issued identification at or before loan closing.

Definition of Resident

- Living in Alaska with the intent to remain indefinitely.
- Primary and permanent home in Alaska.
- Present in Alaska except for brief intervals (generally less than 90 days) except for military service, education or good cause.

Program Requirements

- Purchases - Loans are available for limited entry permits, quota shares, vessels, or gear purchased less than 12 months prior to the date your application is received.
- Refinancing - Vessels or gear loans made by other lenders more than one year prior to receipt of your application are eligible for financing.
- Collateral - The item being financed (limited entry permit, vessel, etc.) will be the collateral for the loan and, and generally, a priority lien must be obtained.

Terms and Conditions

- Interest rate is 2% above the Prime Rate, not to exceed 10.5%, not less than 3%.
- Interest rate for Product Quality Improvement and engine fuel efficiency upgrade loans is 2% **below** the Prime Rate, not to exceed 10.5%, not less than 3%.
- Interest rate will be fixed at the time of loan approval.
- Maximum loan term is 15 years.
- Borrower is responsible to pay all direct costs incurred in processing an application including surveys, inspections, appraisals, title insurance, etc.

Information and Applications

- Engine Fuel Efficiency Upgrade
- Extension
- Limited Entry Permit Purchase
- Loan Assumption
- Product Quality Improvement
- Purchase of Quota Shares
- Refinance
- Refinance of Vessel or Gear
- Tax Obligation
- Tender Vessel Product Quality Improvement
- Vessel Purchase
- Vessel Upgrade or Gear Purchase/Upgrade

The Division of Economic Development, Department of Commerce, Community, and Economic Development complies with Title II of the Americans with Disabilities Act of 1990. This publication is available in alternative communication formats upon request. Please contact the Division of Economic Development at (907)465-2510 or TDD (907)465-5437 to make any necessary arrangements.

Quick Links...

- Alaska Capstone Avionics Loan Program
- Community Quota Entity (CQE)
- Commercial Fishing
- Small Business Economic Development
- Rural Development Initiative Fund
- Fisheries Enhancement

Of Interest...

- Fisheries Enhancement Revolving Loan Fund Program Overview
- Interest Rates
- IFQs for Sale
- Permits for Sale
- Real Estate for Sale
- Vessels for Sale
- Auto Pay Program
- 'TEL' Payment Program
- Staff Photos
- Comments
- Related Sites

Toll Free 1-800-478-5626 within Alaska
Juneau Office - 3032 Vintage Blvd. Suite 100 - PO Box 34159 - Juneau, AK 99803-4159 - (907)465-2510 - Fax (907)465-2103 - TDD (907)465-4410
Anchorage Office - 550 W. 7th Ave. Suite 1930 - Anchorage, AK 99501-3570 - (907)269-8150 - Fax (907)269-8147
Having trouble with this site, or just have a general question? Click here to email the Webmaster

Interest Rates

Effective January 01, 2011, the interest rates are:

Fund	Rate	Authority
Alaska Capstone Avionics (Fixed at 4.0%)	4.0%	3 AAC 75.045(c)
Commercial Fishing (Prime + 2%, not to exceed 10.5%, not less than 3%)	5.5%	3 AAC 80.055(k)
Engine Fuel Efficiency Upgrade (Prime - 2%, not to exceed 10.5%, not less than 3%)	3.0%	3 AAC 80.055(k)
Fisheries Enhancement (Prime + 1%, not to exceed 9.5%, not less than 3%)	5.0%	3 AAC 81.055(k)
Product Quality Improvement (Prime - 2%, not to exceed 10.5%, not less than 3%)	3.0%	3 AAC 80.055(k)
Rural Development Initiative Fund (Prime - 1%, not less than 4%)	4.0%	3 AAC 99.865
Small Business Economic Development (Prime - 4%, not less than 4%)	4.0%	Board Delegation

XML

These rates stay in effect until changed, which will be no sooner than April 01, 2011, at which time they will be re-evaluated and may change.

Quick Links...

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DIVISION OF ECONOMIC DEVELOPMENT
DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT
STATISTICS FOR LOAN SERVICING

(Dollars in Thousands) Effective December 31, 2010

DCCED LOANS	COMM. FISH.	FISH. AK CAPSTONE ENHANCE	AVIONICS	HIST. DIST.	MINING	ALTERN. ENERGY	TOTAL
Number of Loans Outstanding	1,566	174	7	2	0	1	1,750
Principal Amount Outstanding	67,020.1	60,914.5	425.4	51.9	0.0	2.5	128,414.4
Average Loan Amount	42.8	350.1	60.8	26.0	0.0	2.5	73.4
Number of Other Accounts	441	138	0	0	1	3	583
Principal Amount Outstanding	8,223.8	33,378.0	0.0	0.0	381.9	12.2	41,995.9
Total Loans and other Accounts	2007	312	7	2	1	4	2333
Total Principal Amount Outstanding	75,243.9	94,292.5	425.4	51.9	381.9	14.7	170,410.3
Total Average Loan Amount	37.5	302.2	60.8	26.0	381.9	3.7	73.0
DELINQUENCY AND DEFAULT STATISTICS							
Statistics Based on Balances Outstanding							
Delinquent	3.0%	0.0%	0.0%	0.0%	0.0%	100.0%	1.3%
Foreclosure	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%

SERVICED FOR OTHER AGENCIES	SMALL BUS. ECON. DEV.	BULK FUEL BRIDGE GRANT	ALCOHOL	RURAL DEV RDIF	RURAL DEV FISH REVITAL	TOTAL
Number of Loans Outstanding	57	30	0	27	12	126
Principal Amount Outstanding	5,924.6	1,797.6	0.0	2,880.4	1,061.5	11,664.1
Average Loan Amount	103.9	59.9	0.0	106.7	88.5	92.6
Number of Other Accounts	10	0	0	3	0	13
Principal Amount Outstanding	763.5	0.0	0.0	17.9	0.0	781.4
Total Loans and Other Accounts	67	30	0	30	12	139
Total Principal Amount Outstanding	6,688.1	1,797.6	0.0	2,898.3	1,061.5	12,445.5
Total Average Loan Amount	99.8	59.9	0.0	96.6	88.5	89.5
DELINQUENCY AND DEFAULT STATISTICS						
Statistics Based on Balances Outstanding						
Delinquent	4.1%	0.0%	0.0%	0.0%	0.0%	2.5%
Foreclosure	0.0%	0.0%	0.0%	11.0%	0.0%	3.2%

Notes:
Delinquent is defined as 30 days or more past due.
Other Accounts include judgments, deferred interest, accounts receivable, and repossessed property.

Serviced for other state agencies:
The Small Business and Economic Development, Rural Development Initiative Fund loan portfolios and the Rural Development Fisheries Revitalization loan programs are serviced for the Alaska Industrial Development and Export Authority.

The Bulk Fuel Bridge Loan Fund (BFBLF) portfolio is serviced for the Department of Commerce, Community, and Economic Development, Division of Community & Regional Affairs

The Alcohol and Drug Abuse (ADA) portfolio is serviced for the Department of Health and Social Services.

Prepared by Division of Economic Development 1/25/2011

SUMMARY

Total No. of Loans Outstanding	1,876
Total Principal Amount Outstanding	140,078.5
Total Average Loan Amount	74.7
Total No. of Other Accounts	596
Total Principal Amounts of Other Accounts	42,777.3
Delinquency and Default Statistics	
Statistics Based on Balances Outstanding	
Delinquent	1.3%
Foreclosure	0.2%
TOTAL LOANS AND OTHER ACCOUNTS	**2,472**
TOTAL PRINCIPAL OUTSTANDING	**182,855.8**

Division of Economic Development
Department of Commerce, Community, and Economic Development

Product Quality Improvement Loans as of December 31, 2010

	Section A		Section B		
	Branch 205 Number of Loans	Branch 205 Amount of New Loans	Branch 215 Number of Loans	Branch 215 Amount of New Loans	FY TOTALS
FY 2011	13	1,189,700.00	5	218,270.00	1,407,970.00
FY 2010	11	504,255.00	9	265,196.99	769,451.99
FY 2009	19	1,367,470.00	11	375,449.00	1,742,919.00
FY 2008	9	514,400.00	5	218,000.00	732,400.00
FY 2007	15	1,059,728.00	3	165,000.00	1,224,728.00
FY 2006	17	671,699.00	5	287,774.00	959,473.00
FY 2005	8	412,258.00	4	194,750.00	607,008.00
FY 2004	19	881,302.00	3	48,285.00	929,587.00
FY 2003	13	904,971.00	5	132,802.61	1,037,773.61
FY 2002	7	266,600.00	9	195,138.00	461,738.00
FY 2001	8	370,430.00	2	113,700.00	484,130.00
FY 2000	6	690,420.00	8	181,403.00	871,823.00
FY 1999	7	343,212.00	1	13,200.00	356,412.00
TOTALS	152	9,176,445.00	70	2,408,968.60	11,585,413.60
AVERAGES	***12***	***705,880.38***	***5***	***185,305.28***	***891,185.66***

Engine Efficiency Upgrades as December 31, 2010

	Section A		Section B		
	Branch 206 Number of Loans	Branch 206 Amount of New Loans	Branch 219 Number of Loans	Branch 219 Amount of New Loans	FY TOTALS
FY 2011	21	1,597,948.00	2	94,790.00	1,692,738.00
FY 2010			18	718,691.00	0.00
FY 2009			30	1,516,213.00	0.00
TOTALS	21	1,597,948.00	50	2,329,694.00	1,692,738.00
AVERAGES	***21***	***1,597,948.00***	***17***	***776,564.67***	***564,246.00***

Prepared by Division of Economic Development
1/25/2011

RESOURCE DEVELOPMENT COUNCIL

Growing Alaska Through Responsible Resource Development

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John Zager

Ex-Officio Members
Senator Mark Begich
Senator Lisa Murkowski
Congressman Don Young
Governor Sean Parnell

February 7, 2011

Representative Paul Seaton
House Fisheries Committee
Alaska State Legislature
State Capitol, Room 102
Juneau, AK 99801

RE: HB59 - Commercial Fishing Loan Act

Dear Representative Seaton:

On behalf of the Resource Development Council for Alaska, Inc., (RDC), I am writing in support of HB59 - Commercial Fishing Loan Act.

RDC is a statewide business association comprised of individuals and companies from Alaska's oil and gas, mining, forest products, tourism and fisheries industries. RDC's membership includes Alaska Native Corporations, local communities, organized labor, and industry support firms. RDC's purpose is to encourage a strong, diversified private sector in Alaska and expand the state's economic base through the responsible development of our natural resources.

Throughout the last several years, Alaskans have been struggling with high energy costs. Fuel costs and usage have escalated as fisherman are required to go further out for catch due to impacts from endangered species listings, critical habitat designations, marine protected areas, and fish movement. Opportunities to improve energy efficiency through state loans are important not only for the pocket books of the fisherman who harvest over half of this nation's total catch, but also for the environment—increased efficiency will likely lead to lower costs and ultimately decreased carbon emission. Encouraging such improvements/upgrades to be completed instate, as this bill provides, allows for even more benefits to be felt within Alaska.

We encourage the committee to vote in favor of this bill. Thank you for your consideration.

Sincerely,

Marleanna Hall
Projects Coordinator

121 West Fireweed Lane, Suite 250, Anchorage, Alaska 99503-2035
Phone: 907-276-0700 Fax: 907-276-3887 Email: resources@akrdc.org Website: www.akrdc.org

ALASKA STATE HOUSE OF REPRESENTATIVES

Representative Steve Thompson, Chair
Alaska State Capitol Room 428
Juneau, Alaska 99801
Phone: 907-465-3004
Fax: 907-465-2070

Meeting Schedule
Days: Tuesday & Thursday
Time: 5 to 7pm
Location: Capitol Room 120
Email: House_Fisheries@legis.state.ak.us

House Special Committee on Fisheries

Date: April 6, 2011

Re: Waiver: House Bill 59 – Commercial Fishing Loan Act

We the under signed agree to waive HB 59 from the House Special Committee on Fisheries and on to the House Finance Committee. Agreement to waive and signature do not constitute support or opposition to the bill, or obligate the member to a specific vote on the House Floor.

Rep. Steve Thompson, Chair

Rep. Craig Johnson, Vice-chair

Rep. Alan Austerman

Rep. Bob Herron

Rep. Lance Pruitt

Rep. Scott Kawasaki

Rep. Bob Miller

Subject: Bill Waiver

HB 59 - Allowing possible 2% reduction of interest rate on loans under the Commercial Fishing Loan Act

Sponsor: Rep Seaton

History:
Heard in H Fish 2/8/11

Merged into HB121 (Gov, Creating Comm Charter, Mariculture and Micro Loans)

Passed from H Fish as merged HB 121 on 2/25/11

RE for Waiver:
Actions in H Fin removed HB 59 provisions regarding the Commercial Fishing Loan Fund - retaining the policy for the newly created Loan Funds but abrogating it for the Fund for which the sponsor originally introduced the bill.

Therefore, sponsor wants to re-activate original HB 59.

CS FOR HOUSE BILL NO. 121(FSH)

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-SEVENTH LEGISLATURE - FIRST SESSION

BY THE HOUSE SPECIAL COMMITTEE ON FISHERIES

Offered: 2/25/11
Referred: Resources, Finance

Sponsor(s): HOUSE RULES COMMITTEE BY REQUEST OF THE GOVERNOR

A BILL

FOR AN ACT ENTITLED

"An Act relating to loans made to commercial fishermen under the Commercial Fishing Loan Act for product quality improvements and energy efficiency upgrades; establishing the commercial charter fisheries revolving loan fund, the mariculture revolving loan fund, and the Alaska microloan revolving loan fund and relating to those funds and loans from those funds; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

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*** Section 1.** AS 16.10.320 is amended by adding a new subsection to read:

(*l*) For a new loan under AS 16.10.300 - 16.10.370, made on or after the effective date of this Act, the department may provide a reduction of the interest rate of not more than two percent if at least 50 percent of the loan proceeds are used by the borrower for product quality improvements or energy efficiency upgrades if the improvements or upgrades use products manufactured or produced in the state. When the department offers a reduction under this subsection, the department shall provide

the reduction to all loan applicants who meet the criterion described in this subsection. In this subsection, "manufactured or produced" means processing, developing, or making an item into a new item with a distinct character and use.

*** Sec. 2.** AS 16.10 is amended by adding new sections to read:

Article 13. Commercial Charter Fisheries Revolving Loan Fund.

Sec. 16.10.801. Commercial charter fisheries revolving loan fund. (a) The commercial charter fisheries revolving loan fund is created in the Department of Commerce, Community, and Economic Development to carry out the purposes of AS 16.10.801 - 16.10.890.

(b) The commercial charter fisheries revolving loan fund consists of the following:

(1) money appropriated to, transferred to, or received by gift, grant, devise, bequest, or donation to the fund;

(2) principal and interest payments or other income earned on loans or investments of the fund;

(3) money chargeable to principal or interest that is collected through liquidation by foreclosure or other process on loans made under AS 16.10.801 - 16.10.890.

(c) Money in the fund may be used by the legislature to make appropriations for costs of administering AS 16.10.801 - 16.10.890.

Sec. 16.10.805. Powers and duties of the department. The department may

(1) make loans to eligible applicants under AS 16.10.801 - 16.10.890

(A) for the purchase of charter halibut permits;

(B) for the purchase or construction of a charter halibut fishing vessel;

(C) to upgrade existing charter halibut fishing vessels and gear for the purpose of improving engine fuel efficiency;

(D) to refinance debt obligations made by other lenders more than 12 months before the department received the loan application and incurred by an applicant for the purchase of charter halibut fishing vessels or gear if the applicant otherwise qualifies for a loan under AS 16.10.801 -

16.10.890; the department may collect a refinancing loan origination charge as provided by regulation;

(2) receive, take, hold, and administer any appropriation, transfer, gift, grant, bequest, devise, or donation of money for the fund;

(3) establish amortization plans for repayment of loans, including extensions of the terms of loans;

(4) allow an assumption of a loan if

(A) the applicant meets the requirements established under this section; and

(B) approval of the assumption would be consistent with the purposes of AS 16.10.801 - 16.10.890;

(5) establish the rate of interest for loans consistent with law;

(6) charge and collect fees for services provided under AS 16.10.801 - 16.10.890;

(7) adopt regulations under AS 44.62 necessary to carry out the provisions of AS 16.10.801 - 16.10.890, including regulations to establish reasonable fees for services provided; and

(8) designate agents and delegate powers as necessary to the agents.

Sec. 16.10.810. Eligibility. (a) For an applicant to be eligible for a loan under AS 16.10.801 - 16.10.890, the applicant shall be a resident of the state, as determined under (c) of this section, and shall

(1) qualify for the purchase of a charter halibut permit under applicable law;

(2) qualify as a transferee for a charter halibut permit under applicable law;

(3) purchase or construct a charter halibut fishing vessel; or

(4) upgrade an existing charter halibut fishing vessel or gear for the purpose of improving engine fuel efficiency.

(b) In addition to the requirements set out in (a) of this section, the applicant

(1) may not be eligible for financing from other recognized commercial lending institutions; or

(2) shall be able to obtain only a portion of the total loan request from a recognized commercial lending institution.

(c) To meet the residency requirements of (a) of this section, the applicant

(1) shall physically reside in this state and maintain a domicile in this state during the 24 consecutive months preceding the date of application for the program; and

(2) may not have

(A) declared or established residency in another state; or

(B) received residency or a benefit based on residency from another state.

Sec. 16.10.815. Limitations on loans. (a) Except as provided in (b) of this section, a loan under AS 16.10.801 - 16.10.890

(1) may not exceed $100,000 a year;

(2) may not exceed a term of 15 years, except for extensions under AS 16.10.805;

(3) may not bear interest at a rate greater than the prime rate, as defined in AS 44.88.599, plus two percentage points, but which may not be less than three percent per year and not more than 10 1/2 percent a year;

(4) must be secured by a first priority lien on collateral acceptable to the commissioner; and

(5) may not be made to a person who has a past due child support obligation established by court order or by the child support services agency under AS 25.27.160 - 25.27.220 at the time of application.

(b) The interest rate for loans for the improvement of engine fuel efficiency must be two percentage points below the prime rate, as defined in AS 44.88.599, but may not be less than three percent a year and not more than 10 1/2 percent a year.

(c) The total balances outstanding on loans made to a borrower under AS 16.10.805 may not exceed $300,000.

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(d) After the initial interest rate is set under (a) or (b) of this section for a loan made under AS 16.10.801 - 16.10.890, the department may provide a reduction of the interest rate of not more than two percent if at least 50 percent of the loan proceeds are

used by the borrower for engine fuel efficiency improvements if the upgrades use products manufactured or produced in the state. When the department offers a reduction under this subsection, the department shall provide the reduction to all loan applicants who meet the criterion described in this subsection. In this subsection, "manufactured or produced" means processing, developing, or making an item into a new item with a distinct character and use.

Sec. 16.10.820. Default. If the borrower defaults on a note, the department shall notify the borrower of the default and the consequences of default by mailing a notice to the borrower's most recent address provided to the department by the borrower or obtained by the department.

Sec. 16.10.825. Special account established. (a) The foreclosure expense account is established as a special account within the commercial charter fisheries revolving loan fund.

(b) The department may expend money credited to the foreclosure expense account when necessary to protect the state's security interest in collateral on loans granted under AS 16.10.815 or to defray expenses incurred during foreclosure proceedings after an obligor defaults.

Sec. 16.10.830. Disposal of property acquired after default. The department shall dispose of property acquired through default of a loan made under AS 16.10.801 - 16.10.890. Disposal must be made in a manner that serves the best interest of the state and may include the amortization of payments over a period of years.

Sec. 16.10.835. Waiver of confidentiality. The commissioner may release information about the borrower's loan to any individual if release of the information has been authorized by the borrower.

Sec. 16.10.890. Definitions. In AS 16.10.801 - 16.10.890,

(1) "commissioner" means the commissioner of commerce, community, and economic development;

(2) "department" means the Department of Commerce, Community, and Economic Development.

Article 14. Mariculture Revolving Loan Fund.

Sec. 16.10.900. Mariculture revolving loan fund. (a) The mariculture

revolving loan fund is created within the Department of Commerce, Community, and Economic Development to carry out the purposes of AS 16.10.900 - 16.10.945.

(b) The mariculture revolving loan fund consists of the following:

(1) money appropriated to, transferred to, or received by gift, grant, devise, bequest, or donation to the fund;

(2) principal and interest payments or other income earned on loans or investments of the fund; and

(3) money chargeable to principal or interest that is collected through liquidation by foreclosure or other process on loans made under AS 16.10.900 - 16.10.945.

(c) Money in the fund may be used by the legislature to make appropriations for costs of administering AS 16.10.900 - 16.10.945.

Sec. 16.10.905. Powers and duties of the department. The department may

(1) make loans to eligible applicants under AS 16.10.900 - 16.10.945 for the planning, construction, and operation of a mariculture business;

(2) receive, take, hold, and administer any appropriation, transfer, gift, grant, bequest, devise, or donation of money for the fund;

(3) establish amortization plans for repayment of loans, including extensions of the terms of loans;

(4) allow an assumption of a loan if

(A) the applicant meets the requirements established under this section; and

(B) approval of the assumption would be consistent with the purposes of AS 16.10.900 - 16.10.945;

(5) establish the rate of interest for loans consistent with law;

(6) charge and collect fees for services provided under AS 16.10.900 - 16.10.945;

(7) adopt regulations under AS 44.62 necessary to carry out the provisions of AS 16.10.900 - 16.10.945, including regulations to establish reasonable fees for services provided; and

(8) designate agents and delegate powers as necessary to the agents.

Sec. 16.10.910. Eligibility. (a) For an applicant to be eligible for a loan under AS 16.10.900 - 16.10.945, the applicant shall

(1) be a resident of the state, as determined under (c) of this section;

(2) have a permitted mariculture farm location in this state; and

(3) have experience or training in the mariculture industry.

(b) In addition to the requirements set out in (a) of this section, the applicant

(1) may not be eligible for financing from other recognized commercial lending institutions; or

(2) shall be able to obtain only a portion of the total loan request from a recognized commercial lending institution.

(c) To meet the residency requirements of (a) of this section, the applicant

(1) shall physically reside in this state and maintain a domicile in this state during the 24 consecutive months preceding the date of application for the program; and

(2) may not have

(A) declared or established residency in another state; or

(B) received residency or a benefit based on residency from another state.

Sec. 16.10.915. Limitations on loans. (a) Except as provided in (b) and (c) of this section, a loan under AS 16.10.900 - 16.10.945

(1) may not exceed $100,000 a year;

(2) may not exceed a term of 20 years, except for extensions under AS 16.10.905;

(3) may not bear interest at a rate greater than the prime rate, as defined in AS 44.88.599, plus one percentage point, but which may not be less than five percent a year and not more than nine percent a year;

(4) must be secured by a first priority lien on collateral acceptable to the department; and

(5) may not be made to a person who has a past due child support obligation established by court order or by the child support services agency under AS 25.27.160 - 25.27.220 at the time of application.

(b) Subsequent loans may be made to the borrower under AS 16.10.910 if the total of the balances outstanding on the loans received by the borrower does not exceed $300,000.

(c) A loan under AS 16.10.910 may be made for the purchase of boats or vessels determined to be integral to the operation of the farm.

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(d) For a loan made under AS 16.10.900 - 16.10.945, the department may provide a reduction of the interest rate of not more than two percent if at least 50 percent of the loan proceeds are used by the borrower for purchasing products manufactured or produced in the state. When the department offers a reduction under this subsection, the department shall provide the reduction to all loan applicants who meet the criterion described in this subsection. In this subsection, "manufactured or produced" means processing, developing, or making an item into a new item with a distinct character and use.

Sec. 16.10.920. Repayment of principal of and interest on loans. The department may not require the repayment of principal and interest on a loan made under AS 16.10.910 during the first six years of the loan. Interest on the principal of a loan made under AS 16.10.910 may be deferred for a period of not more than the first six years of the loan.

Sec. 16.10.925. Default. If the borrower defaults on a note, the department shall notify the borrower of the default and the consequences of default by mailing a notice to the borrower's most recent address provided to the department by the borrower or obtained by the department.

Sec. 16.10.930. Special account established. (a) The foreclosure expense account is established as a special account in the mariculture revolving loan fund.

(b) The department may expend money credited to the foreclosure expense account when necessary to protect the state's security interest in collateral on loans granted under AS 16.10.910 or to defray expenses incurred during foreclosure proceedings after an obligor defaults.

Sec. 16.10.935. Disposal of property acquired after default. The department shall dispose of property acquired through default of a loan made under AS 16.10.900 - 16.10.945. Disposal must be made in a manner that serves the best interest of the

state and may include the amortization of payments over a period of years.

Sec. 16.10.940. Waiver of confidentiality. The commissioner may release information about the borrower's loan to any individual if release of the information has been authorized by the borrower.

Sec. 16.10.945. Definitions. In AS 16.10.900 - 16.10.945,

(1) "commissioner" means the commissioner of commerce, community, and economic development;

(2) "department" means the Department of Commerce, Community, and Economic Development;

(3) "mariculture" means the farming of shellfish and aquatic plants as defined in AS 16.40.199.

*** Sec. 3.** AS 44.33 is amended by adding new sections to read:

Article 15. Alaska Microloan Revolving Loan Fund.

Sec. 44.33.950. Alaska microloan revolving loan fund. (a) The Alaska microloan revolving loan fund is created in the Department of Commerce, Community, and Economic Development to carry out the purposes of AS 44.33.950 - 44.33.990.

(b) The Alaska microloan revolving loan fund consists of the following:

(1) money appropriated to, transferred to, or received by gift, grant, devise, bequest, or donation to the fund;

(2) principal and interest payments or other income earned on loans or investments of the fund;

(3) money chargeable to principal or interest that is collected through liquidation by foreclosure or other process on loans made under AS 44.33.950 - 44.33.990.

(c) Money in the fund may be used by the legislature to make appropriations for costs of administering AS 44.33.950 - 44.33.990.

Sec. 44.33.955. Powers and duties of the department. The department may

(1) make loans to eligible applicants under AS 44.33.950 - 44.33.990 to be used for working capital, equipment, construction, or other commercial purposes by a business located in the state;

(2) receive, take, hold, and administer any appropriation, transfer, gift, grant, bequest, devise, or donation of money for the fund;

(3) establish amortization plans for repayment of loans, including extensions of the terms of loans;

(4) allow an assumption of a loan if

(A) the applicant meets the requirements established under this section; and

(B) approval of the assumption would be consistent with the purposes of AS 44.33.950 - 44.33.990;

(5) establish the rate of interest for loans consistent with law;

(6) charge and collect fees for services provided under AS 44.33.950 - 44.33.990;

(7) adopt regulations under AS 44.62 necessary to carry out the provisions of AS 44.33.950 - 44.33.990, including regulations to establish reasonable fees for services provided; and

(8) designate agents and delegate powers as necessary to the agents.

Sec. 44.33.960. Eligibility. (a) For an applicant to be eligible for a loan under AS 44.33.950 - 44.33.990, the applicant shall

(1) be a resident of the state, as determined under (b) of this section;

(2) provide a reasonable amount of money from other nonstate sources for use on any project or enterprise for which money from a loan will be used; and

(3) if the requested loan amount is $35,000 or more, provide to the department a document from a state financial institution stating that

(A) the applicant has been denied a loan for the same purpose; or

(B) a loan from the financial institution is contingent on the applicant also receiving a loan from the fund.

(b) To meet the residency requirements of (a) of this section, the applicant

(1) shall physically reside in this state and maintain a domicile in this state during the 12 consecutive months preceding the date of application for the program; and

(2) may not have

(A) declared or established residency in another state; or

(B) received residency or a benefit based on residency from another state.

Sec. 44.33.965. Limitations on loans. (a) The department may use money from the Alaska microloan revolving loan fund to make loans of up to $35,000 to a person or loans of up to $70,000 to two or more persons.

(b) A loan under AS 44.33.950 - 44.33.990

(1) may not exceed a term of six years, except for extensions under AS 44.33.955;

(2) may not bear interest at a rate greater than the prime rate, as defined in AS 44.88.599, plus one percentage point but which may not be less than six percent a year and not more than eight percent a year;

(3) must be secured by collateral acceptable to the commissioner; and

(4) may not be made to a person who has a past due child support obligation established by court order or by the child support services agency under AS 25.27.160 - 25.27.220 at the time of application.

Sec. 44.33.970. Special account established. (a) The foreclosure expense account is established as a special account in the Alaska microloan revolving loan fund.

(b) The department may expend money credited to the foreclosure expense account when necessary to protect the state's security interest in collateral on loans granted under AS 44.33.960 or to defray expenses incurred during foreclosure proceedings after an obligor defaults.

Sec. 44.33.975. Default. If the borrower defaults on a note, the department shall notify the borrower of the default and the consequences of default by mailing a notice to the borrower's most recent address provided to the department by the borrower or obtained by the department.

Sec. 44.33.980. Disposal of property acquired after default. The department shall dispose of property acquired through default of a loan made under AS 44.33.950 - 44.33.990. Disposal must be made in a manner that serves the best interest of the

state and may include the amortization of payments over a period of years.

Sec. 44.33.990. Definitions. In AS 44.33.950 - 44.33.990,

(1) "commissioner" means the commissioner of commerce, community, and economic development;

(2) "department" means the Department of Commerce, Community, and Economic Development.

* **Sec. 4.** This Act takes effect immediately under AS 01.10.070(c).

CS FOR HOUSE BILL NO. 121(FIN)

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-SEVENTH LEGISLATURE - FIRST SESSION

BY THE HOUSE FINANCE COMMITTEE

Offered: 4/5/11
Referred: Rules

Sponsor(s): HOUSE RULES COMMITTEE BY REQUEST OF THE GOVERNOR

A BILL

FOR AN ACT ENTITLED

"An Act establishing the commercial charter fisheries revolving loan fund, the mariculture revolving loan fund, and the Alaska microloan revolving loan fund and relating to those funds and loans from those funds; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

*** Section 1.** AS 16.10 is amended by adding new sections to read:

Article 13. Commercial Charter Fisheries Revolving Loan Fund.

Sec. 16.10.801. Commercial charter fisheries revolving loan fund. (a) The commercial charter fisheries revolving loan fund is created in the Department of Commerce, Community, and Economic Development to carry out the purposes of AS 16.10.801 - 16.10.890.

(b) The commercial charter fisheries revolving loan fund consists of the following:

(1) money appropriated to, transferred to, or received by gift, grant, devise, bequest, or donation to the fund;

(2) principal and interest payments or other income earned on loans or investments of the fund;

(3) money chargeable to principal or interest that is collected through liquidation by foreclosure or other process on loans made under AS 16.10.801 - 16.10.890.

(c) Money in the fund may be used by the legislature to make appropriations for costs of administering AS 16.10.801 - 16.10.890.

Sec. 16.10.805. Powers and duties of the department. The department may

(1) make loans to eligible applicants under AS 16.10.801 - 16.10.890

(A) for the purchase of charter halibut permits;

(B) for the purchase or construction of a charter halibut fishing vessel;

(C) to upgrade existing charter halibut fishing vessels and gear for the purpose of improving engine fuel efficiency;

(D) to refinance debt obligations made by other lenders more than 12 months before the department received the loan application and incurred by an applicant for the purchase of charter halibut fishing vessels or gear if the applicant otherwise qualifies for a loan under AS 16.10.801 - 16.10.890; the department may collect a refinancing loan origination charge as provided by regulation;

(2) receive, take, hold, and administer any appropriation, transfer, gift, grant, bequest, devise, or donation of money for the fund;

(3) establish amortization plans for repayment of loans, including extensions of the terms of loans;

(4) allow an assumption of a loan if

(A) the applicant meets the requirements established under this section; and

(B) approval of the assumption would be consistent with the purposes of AS 16.10.801 - 16.10.890;

(5) establish the rate of interest for loans consistent with law;

(6) charge and collect fees for services provided under AS 16.10.801 -

16.10.890;

(7) adopt regulations under AS 44.62 necessary to carry out the provisions of AS 16.10.801 - 16.10.890, including regulations to establish reasonable fees for services provided; and

(8) designate agents and delegate powers as necessary to the agents.

Sec. 16.10.810. Eligibility. (a) For an applicant to be eligible for a loan under AS 16.10.801 - 16.10.890, the applicant shall be a resident of the state, as determined under (c) of this section, and shall

(1) qualify for the purchase of a charter halibut permit under applicable law;

(2) qualify as a transferee for a charter halibut permit under applicable law;

(3) purchase or construct a charter halibut fishing vessel; or

(4) upgrade an existing charter halibut fishing vessel or gear for the purpose of improving engine fuel efficiency.

(b) In addition to the requirements set out in (a) of this section, the applicant must provide to the department a document from a state financial institution stating that

(1) the applicant has been denied a loan for the same purpose; or

(2) a loan from the financial institution is contingent on the applicant also receiving a loan from the fund.

(c) To meet the residency requirements of (a) of this section, the applicant

(1) shall physically reside in this state and maintain a domicile in this state during the 24 consecutive months preceding the date of application for the program; and

(2) may not have

(A) declared or established residency in another state; or

(B) received residency or a benefit based on residency from another state.

Sec. 16.10.815. Limitations on loans. (a) Except as provided in (b) of this section, a loan under AS 16.10.801 - 16.10.890

(1) may not exceed $100,000 a year;

(2) may not exceed a term of 15 years, except for extensions under AS 16.10.805;

(3) may not bear interest at a rate greater than the prime rate, as defined in AS 44.88.599, plus two percentage points, but which may not be less than six percent a year and not more than 10 1/2 percent a year;

(4) must be secured by a first priority lien on collateral acceptable to the commissioner; and

(5) may not be made to a person who has a past due child support obligation established by court order or by the child support services agency under AS 25.27.160 - 25.27.220 at the time of application.

(b) The interest rate for loans for the improvement of engine fuel efficiency must be two percentage points below the prime rate, as defined in AS 44.88.599, but may not be less than six percent a year and not more than 10 1/2 percent a year.

(c) The total balances outstanding on loans made to a borrower under AS 16.10.805 may not exceed $200,000.

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(d) After the initial interest rate is set under (a) or (b) of this section for a loan made under AS 16.10.801 - 16.10.890, the department may provide a reduction of the interest rate of not more than two percent if at least 50 percent of the loan proceeds are used by the borrower for engine fuel efficiency improvements if the upgrades use products manufactured or produced in the state. When the department offers a reduction under this subsection, the department shall provide the reduction to all loan applicants who meet the criterion described in this subsection. In this subsection, "manufactured or produced" means processing, developing, or making an item into a new item with a distinct character and use.

Sec. 16.10.820. Default. If the borrower defaults on a note, the department shall notify the borrower of the default and the consequences of default by mailing a notice to the borrower's most recent address provided to the department by the borrower or obtained by the department.

Sec. 16.10.825. Special account established. (a) The foreclosure expense account is established as a special account within the commercial charter fisheries

revolving loan fund.

(b) The department may expend money credited to the foreclosure expense account when necessary to protect the state's security interest in collateral on loans granted under AS 16.10.815 or to defray expenses incurred during foreclosure proceedings after an obligor defaults.

Sec. 16.10.830. Disposal of property acquired after default. The department shall dispose of property acquired through default of a loan made under AS 16.10.801 - 16.10.890. Disposal must be made in a manner that serves the best interest of the state and may include the amortization of payments over a period of years.

Sec. 16.10.835. Waiver of confidentiality. The commissioner may release information about the borrower's loan to any individual if release of the information has been authorized by the borrower.

Sec. 16.10.890. Definitions. In AS 16.10.801 - 16.10.890,

(1) "commissioner" means the commissioner of commerce, community, and economic development;

(2) "department" means the Department of Commerce, Community, and Economic Development.

Article 14. Mariculture Revolving Loan Fund.

Sec. 16.10.900. Mariculture revolving loan fund. (a) The mariculture revolving loan fund is created within the Department of Commerce, Community, and Economic Development to carry out the purposes of AS 16.10.900 - 16.10.945.

(b) The mariculture revolving loan fund consists of the following:

(1) money appropriated to, transferred to, or received by gift, grant, devise, bequest, or donation to the fund;

(2) principal and interest payments or other income earned on loans or investments of the fund; and

(3) money chargeable to principal or interest that is collected through liquidation by foreclosure or other process on loans made under AS 16.10.900 - 16.10.945.

(c) Money in the fund may be used by the legislature to make appropriations for costs of administering AS 16.10.900 - 16.10.945.

Sec. 16.10.905. Powers and duties of the department. The department may

(1) make loans to eligible applicants under AS 16.10.900 - 16.10.945 for the planning, construction, and operation of a mariculture business;

(2) receive, take, hold, and administer any appropriation, transfer, gift, grant, bequest, devise, or donation of money for the fund;

(3) establish amortization plans for repayment of loans, including extensions of the terms of loans;

(4) allow an assumption of a loan if

(A) the applicant meets the requirements established under this section; and

(B) approval of the assumption would be consistent with the purposes of AS 16.10.900 - 16.10.945;

(5) establish the rate of interest for loans consistent with law;

(6) charge and collect fees for services provided under AS 16.10.900 - 16.10.945;

(7) adopt regulations under AS 44.62 necessary to carry out the provisions of AS 16.10.900 - 16.10.945, including regulations to establish reasonable fees for services provided; and

(8) designate agents and delegate powers as necessary to the agents.

Sec. 16.10.910. Eligibility. (a) For an applicant to be eligible for a loan under AS 16.10.900 - 16.10.945, the applicant shall

(1) be a resident of the state, as determined under (c) of this section;

(2) have a permitted mariculture farm location in this state; and

(3) have experience or training in the mariculture industry.

(b) In addition to the requirements set out in (a) of this section, the applicant

(1) may not be eligible for financing from other recognized commercial lending institutions; or

(2) shall be able to obtain only a portion of the total loan request from a recognized commercial lending institution.

(c) To meet the residency requirements of (a) of this section, the applicant

(1) shall physically reside in this state and maintain a domicile in this

state during the 24 consecutive months preceding the date of application for the program; and

(2) may not have

(A) declared or established residency in another state; or

(B) received residency or a benefit based on residency from another state.

Sec. 16.10.915. Limitations on loans. (a) Except as provided in (b) and (c) of this section, a loan under AS 16.10.900 - 16.10.945

(1) may not exceed $100,000 a year;

(2) may not exceed a term of 20 years, except for extensions under AS 16.10.905;

(3) may not bear interest at a rate greater than the prime rate, as defined in AS 44.88.599, plus one percentage point, but which may not be less than five percent a year and not more than nine percent a year;

(4) must be secured by a first priority lien on collateral acceptable to the department; and

(5) may not be made to a person who has a past due child support obligation established by court order or by the child support services agency under AS 25.27.160 - 25.27.220 at the time of application.

(b) Subsequent loans may be made to the borrower under AS 16.10.910 if the total of the balances outstanding on the loans received by the borrower does not exceed $300,000.

(c) A loan under AS 16.10.910 may be made for the purchase of boats or vessels determined to be integral to the operation of the farm. HB51 - Mari

(d) For a loan made under AS 16.10.900 - 16.10.945, the department may provide a reduction of the interest rate of not more than two percent if at least 50 percent of the loan proceeds are used by the borrower for purchasing products manufactured or produced in the state. When the department offers a reduction under this subsection, the department shall provide the reduction to all loan applicants who meet the criterion described in this subsection. In this subsection, "manufactured or produced" means processing, developing, or making an item into a new item with a

distinct character and use.

Sec. 16.10.920. Repayment of principal of and interest on loans. The department may not require the repayment of principal and interest on a loan made under AS 16.10.910 during the first six years of the loan. Interest on the principal of a loan made under AS 16.10.910 may be deferred for a period of not more than the first six years of the loan.

Sec. 16.10.925. Default. If the borrower defaults on a note, the department shall notify the borrower of the default and the consequences of default by mailing a notice to the borrower's most recent address provided to the department by the borrower or obtained by the department.

Sec. 16.10.930. Special account established. (a) The foreclosure expense account is established as a special account in the mariculture revolving loan fund.

(b) The department may expend money credited to the foreclosure expense account when necessary to protect the state's security interest in collateral on loans granted under AS 16.10.910 or to defray expenses incurred during foreclosure proceedings after an obligor defaults.

Sec. 16.10.935. Disposal of property acquired after default. The department shall dispose of property acquired through default of a loan made under AS 16.10.900 - 16.10.945. Disposal must be made in a manner that serves the best interest of the state and may include the amortization of payments over a period of years.

Sec. 16.10.940. Waiver of confidentiality. The commissioner may release information about the borrower's loan to any individual if release of the information has been authorized by the borrower.

Sec. 16.10.945. Definitions. In AS 16.10.900 - 16.10.945,

(1) "commissioner" means the commissioner of commerce, community, and economic development;

(2) "department" means the Department of Commerce, Community, and Economic Development;

(3) "mariculture" means the farming of shellfish and aquatic plants as defined in AS 16.40.199.

* **Sec. 2.** AS 44.33 is amended by adding new sections to read:

Article 15. Alaska Microloan Revolving Loan Fund.

Sec. 44.33.950. Alaska microloan revolving loan fund. (a) The Alaska microloan revolving loan fund is created in the Department of Commerce, Community, and Economic Development to carry out the purposes of AS 44.33.950 - 44.33.990.

(b) The Alaska microloan revolving loan fund consists of the following:

(1) money appropriated to, transferred to, or received by gift, grant, devise, bequest, or donation to the fund;

(2) principal and interest payments or other income earned on loans or investments of the fund;

(3) money chargeable to principal or interest that is collected through liquidation by foreclosure or other process on loans made under AS 44.33.950 - 44.33.990.

(c) Money in the fund may be used by the legislature to make appropriations for costs of administering AS 44.33.950 - 44.33.990.

Sec. 44.33.955. Powers and duties of the department. The department may

(1) make loans to eligible applicants under AS 44.33.950 - 44.33.990 to be used for working capital, equipment, construction, or other commercial purposes by a business located in the state;

(2) receive, take, hold, and administer any appropriation, transfer, gift, grant, bequest, devise, or donation of money for the fund;

(3) establish amortization plans for repayment of loans, including extensions of the terms of loans;

(4) allow an assumption of a loan if

(A) the applicant meets the requirements established under this section; and

(B) approval of the assumption would be consistent with the purposes of AS 44.33.950 - 44.33.990;

(5) establish the rate of interest for loans consistent with law;

(6) charge and collect fees for services provided under AS 44.33.950 - 44.33.990;

(7) adopt regulations under AS 44.62 necessary to carry out the provisions of AS 44.33.950 - 44.33.990, including regulations to establish reasonable fees for services provided; and

(8) designate agents and delegate powers as necessary to the agents.

Sec. 44.33.960. Eligibility. (a) For an applicant to be eligible for a loan under AS 44.33.950 - 44.33.990, the applicant shall

(1) be a resident of the state, as determined under (b) of this section;

(2) provide a reasonable amount of money from other nonstate sources for use on any project or enterprise for which money from a loan will be used; and

(3) if the requested loan amount is $35,000 or more, provide to the department a document from a state financial institution stating that

(A) the applicant has been denied a loan for the same purpose; or

(B) a loan from the financial institution is contingent on the applicant also receiving a loan from the fund.

(b) To meet the residency requirements of (a) of this section, the applicant

(1) shall physically reside in this state and maintain a domicile in this state during the 12 consecutive months preceding the date of application for the program; and

(2) may not have

(A) declared or established residency in another state; or

(B) received residency or a benefit based on residency from another state.

Sec. 44.33.965. Limitations on loans. (a) The department may use money from the Alaska microloan revolving loan fund to make loans of up to $35,000 to a person or loans of up to $70,000 to two or more persons.

(b) A loan under AS 44.33.950 - 44.33.990

(1) may not exceed a term of six years, except for extensions under AS 44.33.955;

(2) may not bear interest at a rate greater than the prime rate, as defined in AS 44.88.599, plus one percentage point but which may not be less than six

percent a year and not more than eight percent a year;

(3) must be secured by collateral acceptable to the commissioner; and

(4) may not be made to a person who has a past due child support obligation established by court order or by the child support services agency under AS 25.27.160 - 25.27.220 at the time of application.

Sec. 44.33.970. Special account established. (a) The foreclosure expense account is established as a special account in the Alaska microloan revolving loan fund.

(b) The department may expend money credited to the foreclosure expense account when necessary to protect the state's security interest in collateral on loans granted under AS 44.33.960 or to defray expenses incurred during foreclosure proceedings after an obligor defaults.

Sec. 44.33.975. Default. If the borrower defaults on a note, the department shall notify the borrower of the default and the consequences of default by mailing a notice to the borrower's most recent address provided to the department by the borrower or obtained by the department.

Sec. 44.33.980. Disposal of property acquired after default. The department shall dispose of property acquired through default of a loan made under AS 44.33.950 - 44.33.990. Disposal must be made in a manner that serves the best interest of the state and may include the amortization of payments over a period of years.

Sec. 44.33.990. Definitions. In AS 44.33.950 - 44.33.990,

(1) "commissioner" means the commissioner of commerce, community, and economic development;

(2) "department" means the Department of Commerce, Community, and Economic Development.

*** Sec. 3.** This Act takes effect immediately under AS 01.10.070(c).

Alaska State Legislature

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REPRESENTATIVE Paul Seaton

District 35

MEMORANDUM

TO: Representative Steve Thompson
Chair, House Special Committee on Fisheries

FROM: Representative Paul Seaton

DATE: February 2, 2011

RE: Request for hearing, HB 59

I respectfully request a hearing before the House Special Committee on Fisheries on HB 59, Alaska Manufacture Preference for the Commercial Fishing Loan Fund. In Summary, HB 59 allows the Department of Commerce, Community and Economic Development to reduce a borrower's interest rate up to two percentage points if they purchase an Alaska Manufactured Product with at least 50% of their Commercial Fishing Loan.

Attached please find: HB 59; Sponsor Statement; Commercial Fishing Loan Fund Home Page, Common Questions on HB 59; Loan Servicing Stats as of 12-31-10; and Product Improvement Loans as of 12-31-10.

Invited testimony/available for questions: Cathy Jeans, Division of Economic Development, Department of Commerce, Community and Economic Development.

Please make the teleconference available to Legislative Information offices state wide.
At this time I do not expect any off-net participation.

Staff contact: Katie Koester: 465-2028

HB

60

<TARGET><BILL>HB 60</BILL><SUBJECT>HB
60</SUBJECT><COMM>HFSH27</COMM></TARGET>

Alaska State Legislature

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REPRESENTATIVE Paul Seaton

District 35

Shellfish farming has the potential to diversify the economic base of coastal communities impacted by the changing dynamics of the fishing industry. HB 60 allows this expansion of this clean water industry by permitting geoducks to be farmed subtidally in the Gulf of Alaska even if wild geoducks are not present. The bill does not exempt farmers from any health, safety, or other transfer provisions relating to hatchery seed.

The Alutiiq Pride Shellfish Hatchery is the only hatchery that supplies mariculture spat and seed in the State. It was initiated by the State to be a self-sustaining operation in association with the private mariculture farms permitted by the State. Their business plan relies on the sale of geoduck seed. However, an informal policy of the Department of Fish and Game prevents geoduck seed from being utilized by farms anywhere outside of southeast Alaska. These restrictions on the sale of geoduck seed cause the sole hatchery for the mariculture industry in Alaska to require continual subsidy by the State. HB 60 will allow the mariculture industry to develop around the Gulf of Alaska, providing a potentially strong market for seed and private sector financing for the operation of the hatchery.

As non-mobile filter feeders eating plankton, farmed geoducks will not prey on any local commercial, sport or personal use fish. There have been no reports of species displacement in the sedimentary habitat by geoduck clams. Farmed geoducks will not interfere with personal recreational boaters as they are cultivated in the sediment below low tide and without the numerous buoys and floating cages used in oyster farms. No infectious disease has been identified in any wild geoduck population or the geoduck farming industries of Washington, British Columbia, or Alaska.

The conflict involving geoducks in southeast Alaska is between the dive fishermen who harvest wild stock and farmers who wish to farm in areas with existing wild stock. HB 60 would circumvent this conflict because there is no wild geoduck stock in the proposed area. This bill will not override any Department of Natural Resources farm site leasing or Department of Fish & Game permit regulation.

HB 60 eliminates unnecessary hindrances to the growth of the maricluture industry in Alaska and provides a potential alternative economic base for coastal communities while adequately considering the health of our marine ecosystem.

Staff Contact, Katie Koester 465-2028

FISCAL NOTE

STATE OF ALASKA
2011 LEGISLATIVE SESSION

Fiscal Note Number
Bill Version **HB60**
() Publish Date

Identifier (file name) HB060-DNR-CP&L-02-14-11
Title Geoduck Aquatic Farming/Seed Transfer
Sponsor Rep. Seaton
Requester House FSH

Dept. Affected Natural Resources
Appropriation Resource Development
Allocation Claims, Permits and Leases
OMB Component Number 2460

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information					
OPERATING EXPENDITURES	**FY 2012**	**FY 2012**	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**
Personal Services	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Travel	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Services	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commodities	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Capital Outlay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grants	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Miscellaneous	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPERATING	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
CAPITAL EXPENDITURES	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
CHANGE IN REVENUES	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
FUND SOURCE				(Thousands of Dollars)			
1002 Federal Receipts	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1003 GF Match	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1004 GF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1005 GF/Program Receipts	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1037 GF/Mental Health	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other (please identify)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Estimate of any current year (FY2011) cost

POSITIONS

Full-time	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Part-time	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Temporary	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Why this fiscal note differs from previous version (if initial version, please note as such)

Initial version

Prepared by Wyn Menefee, Acting Director
Division Mining, Land & Water
Approved by Daniel S. Sullivan
Department of Natural Resources

Phone 269-8501
Date/Time 2/14/11 1:00 PM
Date 2/14/2011

(Revised 1/27/2011 OMB)

FISCAL NOTE

STATE OF ALASKA
2011 LEGISLATIVE SESSION

BILL NO. HB 60

Analysis

HB 60 would allow for the transfer of geoduck seed from a certified hatchery to an aquatic farm.

This bill would have no impact on the Department of Natural Resources' ability to offer aquatic farming and hatchery lease sites under AS 38.05.083. While this bill might open more areas of the state to the aquatic farming of geoducks, which could result in a slight increase in overall aquatic farmsite leasees, the fiscal impact to DNR is anticipated to be minimal and could be addressed with existing staff and resources.

FISCAL NOTE

STATE OF ALASKA
2011 LEGISLATIVE SESSION

Fiscal Note Number
Bill Version **HB 60**
() Publish Date

Identifier (file name) HB060-DFG-CFD-02-10-11
Title Geoduck Aquatic Farming/Seed Transfer
Sponsor Representative Seaton, Gruenberg
Requester House Special Committee on Fisheries

Dept. Affected ADF&G
Appropriation Commercial Fisheries
Allocation Headquarters Fisheries Management
OMB Component Number 2171

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information					
OPERATING EXPENDITURES	**FY 2012**	**FY 2012**	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**
Personal Services	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Travel	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Services	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commodities	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Capital Outlay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grants	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Miscellaneous	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPERATING	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
CAPITAL EXPENDITURES							
CHANGE IN REVENUES							

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1003 GF Match	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1004 GF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1005 GF/Program Receipts	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1037 GF/Mental Health	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other (please identify)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Estimate of any current year (FY2011) cost 0.0

POSITIONS

Full-time	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Part-time	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temporary	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Why this fiscal note differs from previous version (if initial version, please note as such)

Initial version.

Prepared by Geron Bruce, Assistant Director — Phone 907-465-6151
Division Commercial Fisheries Division — Date/Time 02/10/11 3:00PM
Approved by Kevin Brooks, Administrative Services Director — Date 2/10/2011
Department of Fish and Game

(Revised 1/27/2011 OMB)

FISCAL NOTE

STATE OF ALASKA
2011 LEGISLATIVE SESSION

BILL NO. HB60

Analysis

No fiscal impact to the department.

Alaska State Legislature

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REPRESENTATIVE Paul Seaton
District 35

MEMORANDUM

TO: Representative Thompson
Chair, House Special Committee on Fisheries

FROM: Representative Paul Seaton

DATE: January 27, 2011

RE: Request for a hearing, HB 60

I respectfully request a hearing of HB 60 before the House Fisheries Committee

In summary, HB 60 states that the Department of Fish and Game cannot use the absence of wild geoducks in an area to deny a farming permit.

Attached please find: HB 60, sponsor statement, Interesting Geoduck Facts, Article 2 Aquatic Farming, Letter from Alutiiq Pride Shellfish Hatchery, Home page for three minute trailer for "3 feet under – Digging Deep for the Geoduck"

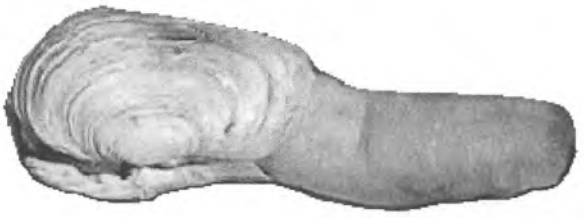
In order to show the brief three minute clip "3 Feet Under – Digging Deep for the Geoduck" I will need a computer and projector.

All teleconference sites are welcome; however there are no special requests. At the committee's discretion, Jeff Hettrick, the manager of the Alutiiq Pride Shellfish Hatchery will need to call in off net.

Staff contact: Katie Koester, 465-2028

Interesting Geoduck Facts

Latin name: *Panopea abrupta* (Conrad, 1849)
Superfamily: Hiatellidae
Family: Hiatellidae



- **"The common name for geoduck has a native American origin, meaning "dig deep", a reference to humans or sea otters digging them. The scientific name is *Panopea abrupta* (Conrad, 1849) and I believe it is the largest intertidal clam in the world. It is the largest species of Panopea."**
  Harbo, R.1997.Shells and Shellfish of the Pacific Northwest".

- **The geoduck clam is sometimes spelled: goeduck, goiduck, or gweduck.**

- **The Chinese call the geoduck the "elephant trunk clam"**

- **Native to the northern Pacific coasts of Canada and the United States of America, that is, along the coasts of Washington state and the province of British Columbia. About 109 million adult geoducks are packed into Puget Sound's sediments the biggest bunch of marine animals in the Sound.**

- **The geoduck is the largest intertidal clam (and the largest burrowing clam) in the world with an average weight of approximately 1 kg (2.2 lbs) in B.C. and a shell length to 195 mm (7").**
  - **"I had one of these (Panopea abrupta) on display here at the Seattle Aquarium that was 13 pounds, and I've heard of bigger ones. They are generally credited with being the deepest digging clam, the biggest burrowing clam and it's possible that the geoduck is one of the longest-living mollusks."**
    Roland C. Anderson, PhD; Puget Sound Curator, The Seattle Aquarium (Source)

- **Huge geoducks have been recorded weighing up to 4.5 kg (10 lbs) Hand et al.1996, Harbo 1997 with larger denizens of the deep reported by fishermen in the field. (Source)**
  The maximum documented weight: 7.15 kgs. (Sources differ on this point)

- **Age and growth studies have shown that geoduck clams grow about one inch per**

year in shell length for the first four years of life. The growth rate is gradually reduced after this time. The average size of 2.2 pounds is reached in five to six years.

- Average Age: Adults may live to over 140 years and reach a maximum shell length of 23 cm. Geoducks are among the longest-lived animals in the world. Growth-ring analysis shows many individuals live for more than 100 years. They grow rapidly in the first 10-15 years (approximately 1 inch per year), after which time the growth in shell length almost ceases and is replaced by a thickening of the shell and a slow increase in body weight.
- Oldest Recorded Age: 146 to 168 years (sources differ on this point).
    - "The neck of a geoduck can stretch to 1 meter, from the body and shell of this clam. When the clam is harvested (by divers, using high pressure water jets), the neck contracts. The oldest clam aged from British Columbia is 168 years old!" "
      Harbo, R.1997.Shells and Shellfish of the Pacific Northwest".
- Geoducks are most often found at depths between 10 and 80 feet below the mean low tide mark, but have been reported at depths reaching 360 feet. Average depths from another source: subtidal, from 8 to 120 m depth
- They bury themselves up to a meter deep in sand, silt, gravel and other soft substrates. A developing geoduck will burrow into sediment at an approximate rate of 1 foot per year. After digging about 3 feet deep, the adult geoduck settles in for 100 years or more.
- Siphons and neck cannot be withdrawn into their shell. In burrowed adults, the siphon may stretch 39 inches to the sea bed.
- Geoducks have separate sexes. Spawning occurs annually, primarily from Late April to July, when waters are warm. Females release from 7-10 million eggs, which develop through several stages in the water column until settling on the bottom within 40-50 days. At a shell length of 2 mm, they burrow into the substrate and can bury to a refuge depth of 60 cm in two years. They are sexually mature by 3 yrs.
- The of the geoduck is thin, it lacks teeth, and it may attain a length of 8 in. (20 cm). The valves, or two parts of the shell, are always open in the adult, because the body and siphons are too large to be retracted.
- The geoduck feeds on phytoplankton (single-celled marine algae), mostly diatoms and flagellates. Due to it's diet, one must be careful of paralytic shellfish poison (PSP) or "red tides". Check with autorities if unsure wheter or not there is a red tide before attempting to invite a geoduck for lunch. Red tides are harmless to the clams, but they can be fatal to humans.
- As Food: The neck can be cut or ground and used in chowders. The body meat, when sliced, pounded and sautéed it resembles abalone. Although they are edible,

they are not widely marketed due to their inaccessibility. They are exposed for only a few hours a month, during minus tides, and even then only a very fast person digging with a shovel can attempt to dig out this fast burrowing clam. (Note: sport limits for the stae of Washington are three per day)

- See the Underwater Harvestors Page for information of purchasing, storing, preparing and recipes for geoducks
- The prime meat comes from the neck, which may be up to 24-inches when fully extended, and the mantle can be cut or ground and used in chowders. The neck meat is often used in sushi or minced into patties and quick fried.
- Welcome to Geoduck Recipes: not only recipes but an introduction to geoduck aquaultue. By Grant Jones and his wife, Ashley.
- Mirugai Sushi: Source

- Predators: sea stars, crabs, fishes, and birds.

- SCUBA divers utilize high-pressure water to "dig" out the geoduck. The divers wear dry suits for protection from the cold water and they are supplied with air pumped down to them through a flexible hose from a compressor onboard a fishing boat. They must wear heavy weights to keep them submerged. Divers walk along the bottom for geoduck shows, which are the visible exposed tip of a siphon or dimple left in the sand from a retracted siphon. The divers then use a nozzle fed with high pressure water from the fishing boat above them to liquefy the sand around the geoduck thus removing the clam. The geoduck is then placed into a bag clipped to their waist. Divers are in constant communication with their boat via high tech diver to ship communications.

Resources Used for this Page and Other Sites on the Geoduck:

- The Columbian (2007) another good facts page
- Canada Fishery Management:
- Geoduck.org - Canada
- Fact Sheets - Geoduck
- Geoduck clam (Panopea abrupta): Anatomy, Histology, Development, Pathology, Parasites and Symbionts
- Geoduck farms considered - As many as 10 operations could be started along the coast ... Nicholas Read, Vancouver Sun
- Geoduck Information: David George Gordon, "Field Guide to the Geoduck"
- Geoduck FAQs:
- Geoduck Fact sheet: Government of Canada
  Harbo, R.1997.Shells and Shellfish of the Pacific Northwest".
- Fisheries and Oceans Canada Stock Status Report (pdf file)
- Washington State geoduck facts: Washington Department of Fish and Wildlife
- Three Feet Under
- The Geoduck Chronicles: How an obscure bivalve became the object of international desire
- NOAA FAQs
- Roland C. Anderson, PhD; Puget Sound Curator, The Seattle Aquarium
- Science
- Wikipedia
- Toxicity in Geoducks: Red Tide

- **Underwater Harvester's Association:**
- **King Clam**
- **Oceans Alive**
- **Puget Sound Online - Current Creature- Puget Sound Sealife**
- **Seatlepi.com: Cashing in on geoducks**
  Once chowder fodder, the giant clam can fetch up to $24 a pop
- **To Prepare Geoduck For The Table.....**
- **The Geoduck Aquaculture Program**
- **Shellfish Commercial Fisheries - Geoduck - Southeast Alaska and Yakutat**
  CURRENT NEWS RELEASES AND FISHERY UPDATES
- **Seattle Times: 'Duck' is a misnomer for bountiful 'King Clam'**
- **Monteray Aquarium - Geoduck Clams**
- **GOOEY DUCKS (geoducks) fun site**
- **A Geoduck Blows Bubbles at Dungeness Spit**

Comments From My Viewers

- Geoducks may be the fastest flying clam but they settle in they are not going win any races with with any other animal except another geoduck. Thanks for you info, Bill Lackner

To Page Top	To Bivalve Page	To Home Page

Article 02. AQUATIC FARMING

Sec. 16.40.100. Aquatic farm and hatchery permits.

(a) A person may not, without a permit from the commissioner, construct or operate

(1) an aquatic farm; or

(2) a hatchery for the purpose of supplying aquatic plants or shellfish to an aquatic farm.

(b) A permit issued under this section authorizes the permittee, subject to the conditions of AS 16.40.100 - 16.40.199 and AS 17.20, to

(1) acquire, purchase, offer to purchase, transfer, possess, sell, and offer to sell stock and aquatic farm products that are used or reared at the hatchery or aquatic farm; and

(2) except as provided in (f) of this section, harvest and, without further cultivation, sell an insignificant population that may be present at the aquatic farm site of a wild stock of a shellfish species intended to be cultured at the site.

(c) The commissioner may attach conditions to a permit issued under this section that are necessary to protect natural fish and wildlife resources.

(d) Notwithstanding other provisions of law, the commissioner may not issue a permit under this section for the farming of, or hatchery operations involving, Atlantic salmon.

(e) Upon the expiration or termination of a permit issued under this section, a person who holds a permit for an aquatic farming site where wild stocks of shellfish indigenous to the site are cultured shall, as a condition of the permit, restore the wild stock of shellfish, as consistent with sustained yield management of the wild stock, to the population level that existed on the site when the permit for the site was initially issued by the commissioner. A permit holder is not required to restore that portion of the wild stock of shellfish that was removed from an aquatic farming site by a common property fishery conducted after the issuance of the permit for the aquatic farming site.

(f) If the wild stock of a shellfish species to be cultured at an aquatic farm site exceeds the amount determined by the department to be an insignificant population and if the commissioner determines in writing that removal from the site of that portion of the stock that exceeds an insignificant population would benefit the public and that removal of the stock by a person other than the permittee would unreasonably interfere with the operation of the aquatic farm, the commissioner may authorize the permittee to remove and sell the excess amount of the wild stock from the site, if the permittee pays reasonable compensation, as defined by the department, to the department for the harvest and sale of the excess wild stock. The department shall deposit the money received under this subsection into the general fund. The legislature may appropriate the money received under this section to the department for shellfish management and enhancement.

Sec. 16.40.105. Criteria for issuance of permits.

The commissioner shall issue permits under AS 16.40.100 on the basis of the following criteria:

(1) the physical and biological characteristics of the proposed farm or hatchery location must be suitable for the farming or the shellfish or aquatic plant proposed;

(2) the proposed farm or hatchery may not require significant alterations in traditional fisheries or other existing uses of fish and wildlife resources;

(3) the proposed farm or hatchery may not significantly affect fisheries, wildlife, or their habitats in an adverse manner;

(4) the proposed farm or hatchery plans and staffing plans must demonstrate technical and operational feasibility; and

(5) the proposed farm site may not include more than an insignificant population of a wild stock, on the site, of a shellfish species intended to be cultured.

Sec. 16.40.110. Permit application, renewal, and transfer.

(a) An applicant for an aquatic farming or hatchery permit required under AS 16.40.100 shall apply on a form prescribed by the commissioner. An application for a permit must include a plan for the development and operation of the aquatic farm or hatchery, which must be approved by the commissioner before the permit is issued.

(b) An application for renewal or transfer of a permit must be accompanied by fees required by the commissioner, a report of the disease history of the farm or hatchery covered by the permit, and evidence that satisfies the commissioner that the applicant has complied with the development plan required under (a) of this section. The commissioner may require a health inspection of the farm or hatchery as a condition of renewal. The department may conduct the inspection or contract with a disease diagnostician to conduct the inspection.

(c) A person to whom a permit is transferred may use the permit only for the purposes for which the permit was authorized to be used by the transferor, and subject to the same conditions and limitations.

Sec. 16.40.120. Aquatic stock acquisition permits.

(a) A person may not acquire aquatic plants or shellfish from wild stock in the state for the purpose of supplying stock to an aquatic farm or hatchery required to have a permit under AS 16.40.100 unless the person holds an acquisition permit from the commissioner.

(b) An acquisition permit authorizes the permit holder to acquire the species and quantities of wild stock in the state specified in the permit for the purposes of supplying stock to

(1) an aquatic farm or hatchery required to have a permit under AS 16.40.100;

(2) the department.

(c) The commissioner shall specify the expiration date of an acquisition permit and may attach conditions to an acquisition permit, including conditions relating to the time, place, and manner of harvest. Size, gear, place, time, licensing, and other limitations applicable to sport, commercial, or subsistence harvest of aquatic plants and shellfish do not apply to a harvest with a permit issued under this section. The commissioner of fish and game shall issue or deny a permit within 30 days after receiving an application.

(d) The commissioner shall deny or restrict a permit under this section upon finding that the proposed harvest will impair sustained yield of the species or will unreasonably disrupt established uses of the resources by commercial, sport, personal use, or subsistence users. The commissioner shall inform the Board of Fisheries of any

action taken on permit applications for species that support commercial fisheries subject to limited entry under AS 16.43 and of any permits denied because of unreasonable disruption of an established use. A denial of the permit by the commissioner must contain the factual basis for the findings.

(e) The Board of Fisheries may adopt regulations for the conservation, maintenance, and management of species for which an acquisition permit is required.

(f) Except as provided in (d) of this section or in a regulation adopted under (e) of this section, the commissioner shall issue a permit if

(1) wild stock is necessary to meet the initial needs of farm or hatchery stock;

(2) there are technological limitations on the propagation of culture stock for the species sought;

(3) wild stock sought is not fully utilized by commercial, sport, personal use, or subsistence fisheries; or

(4) wild stock is needed to maintain the gene pool of a hatchery or aquatic farm.

(g) Aquatic plants and shellfish acquired under a permit issued under this section become the property of the permit holder and are no longer a public or common resource.

Sec. 16.40.130. Importation of aquatic plants or shellfish for stock.
A person may not import into the state an aquatic plant or shellfish for the purpose of supplying stock to an aquatic farm or hatchery unless authorized by a regulation of the Board of Fisheries.

Sec. 16.40.140. Limitation on sale, transfer of stock, and products.

(a) A private hatchery required to have a permit under AS 16.40.100 may sell or transfer stock from the hatchery only to an aquatic farm or other hatchery that has a permit issued under AS 16.40.100, except that shellfish stock may also be sold or offered for sale to an aquatic farm or related hatchery outside of the state.

(b) Stock may not be transferred to or from an aquatic farm or hatchery required to have a permit under AS 16.40.100 without prior notice of the transfer to the commissioner. A notice of transfer shall be submitted at least 45 days before the proposed date of transfer.

(c) A notice of transfer must be accompanied by a report of a health inspection of the stock. The department shall conduct the inspection or contract with a disease diagnostician to conduct the inspection. The cost of inspection shall be borne by the department.

(d) The department may restrict or disapprove a transfer of stock if it finds that the transfer would present a risk of spreading disease.

(e) A person may not sell, transfer, or offer to sell or transfer, or knowingly purchase or receive, an aquatic farm product grown or propagated in the state unless the product was grown or propagated on a farm with a permit issued under AS 16.40.100. The permit must be in effect at the time of the sale, transfer, purchase, receipt, or offer.

Sec. 16.40.150. Disease control and inspection.

(a) The department shall order the quarantine or the destruction and disposal of diseased hatchery stock or of aquatic farm products when necessary to protect wild stock. A holder of a permit issued under AS 16.40.100 shall report to the department an

outbreak or incidence of disease among stock or aquatic farm products of the permit holder within 48 hours after discovering the outbreak or incidence.

(b) A holder of a permit issued under AS 16.40.100 shall allow the department to inspect the permit holder's farm or hatchery during operating hours and upon reasonable notice. The cost of inspection shall be borne by the department.

(c) The department shall develop a disease management and control program for aquatic farms and hatcheries.

(d) The department may enter into an agreement with a state or federal agency or a private, state-certified provider to provide services under (b) and (c) of this section, or inspections under AS 16.40.110(b).

Sec. 16.40.155. Records and reports confidential.
Records required by statute or by a regulation adopted by the department concerning aquatic farm stocks or production, prices, and harvests of aquatic farm products and wild stocks, and annual statistical reports of individual aquatic farms or hatcheries required by statute or by a regulation adopted by the department are confidential and may not be released by the department, except that the department may release the records and reports

(1) to the Department of Revenue and the Department of Natural Resources to assist the departments in carrying out their respective statutory responsibilities;

(2) as necessary to comply with a court order;

(3) provided by an aquatic farm or hatchery permit holder to the permit holder whose activity is the subject of the records or reports;

(4) regarding cumulative annual harvests of wild stocks at individual aquatic farm sites.

Sec. 16.40.160. Regulations.
The commissioner may adopt regulations necessary to implement AS 16.40.100 - 16.40.199.

Sec. 16.40.170. Penalty.
A person who violates a provision of AS 16.40.100 - 16.40.199, a regulation adopted under AS 16.40.100 - 16.40.199, or a term or condition of a permit issued under AS 16.40.100 - 16.40.199, is guilty of a class B misdemeanor.

Sec. 16.40.199. Definitions.
In AS 16.40.100 - 16.40.199

(1) "aquatic farm" means a facility that grows, farms, or cultivates aquatic farm products in captivity or under positive control;

(2) "aquatic farm product" means an aquatic plant or shellfish, or part of an aquatic plant or shellfish, that is propagated, farmed, or cultivated in an aquatic farm and sold or offered for sale;

(3) "aquatic plant" means a plant indigenous to state water or that is authorized to be imported into the state under a permit issued by the commissioner;

(4) "commissioner" means the commissioner of fish and game;

(5) "hatchery" means a facility for the artificial propagation of stock, including rearing of juvenile aquatic plants or shellfish;

(6) "insignificant population" means a population of shellfish that, in the determination of the commissioner, would not attract and support a commercial fishery for that species of shellfish and the harvest and sale of the shellfish would not result in significant alteration in traditional fisheries or other existing uses of fish and wildlife resources if the population were included within an aquatic farm site;

(7) "positive control" means, for mobile species, enclosed within a natural or artificial escape-proof barrier; for species with limited or no mobility, such as a bivalve or an aquatic plant, "positive control" also includes managed cultivation in unenclosed water;

(8) "shellfish" means a species of crustacean, mollusk, or other invertebrate, in any stage of its life cycle, that is indigenous to state water or that is authorized to be imported into the state under a permit issued by the commissioner;

(9) "stock" means live aquatic plants or shellfish acquired, collected, possessed, or intended for use by a hatchery or aquatic farm for the purpose of further growth or propagation.



Alutiiq Pride Shellfish Hatchery
PO Box 369
Seward, AK 99664
907 224-5181 224-5282 fax
jih@seward.net

January 21, 2011

Representative Paul Seaton
State Capitol, Room 201
Juneau, Alaska 99801

Dear Representative Seaton:

The Alutiiq Pride Shellfish Hatchery appreciates your efforts with House Bill 60. We rely upon shellfish seed sales to cover portions of our operating expenses. Geoducks and their high value offer us the best opportunity to achieve our sales goals. To date, the demand has not been originally projected causing a perpetual shortfall in revenue. Opening additional markets in south-central Alaska will help alleviate this deficit.

We are often frustrated by the Alaska Department of Fish and Game and their regulation of transport. It is ironic that we can transport a non-indigenous species such as oysters and cannot transport a native species outside what is considered its natural range. The fact that it will probably be non-reproductive in south- central Alaska should make management easy.

I would suggest we promote a cooperative demonstration project exploring the feasibility of geoduck farming in south-central Alaska headed by the Department of Fish and Game, the Department of Commerce and the Chugach Regional Resources Commission. The shellfish hatchery can provide geoduck seed for such an effort.

Sincerely,

Jeff Hetrick, Director

BEST DOC
Thunderbird
International
Film Festival

OFFICIAL SELECTIONS
Ashland Film Festival
Da Vinci Film Festival
Dahlonega Film Festival
Winslow Film Festival
Dances With Films
Int'l Cultural Film Symposium
S.F. Ocean Film Festival
West Chester Film Festival
Big Bear Lake Film Festival
Napa Valley Film Festival
Bainbridge Film Festival

BEST DOC
short
Port Townsend
Film Festival

Duckumentary.com

3 FEET UNDER

Digging Deep for the Geoduck Clam



a documentary for those who let it all hang out

As seen on PBS stations
Emmy-nominated!

home

synopsis

credits

gallery

contact

reviews

buy the DVD!

The geoduck ("gooey duck") clam sports a phallic, three-foot-long neck and a life span of 160-plus years. 3 FEET UNDER explores how it has garnered a quirky yet devoted following in the Pacific Northwest.

view trailer

Directed by Justin Bookey
63 min., digital video. Available on DVD.

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+
Coolbellup Media, Inc.

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Photo: MSCUA, Univ. of Wash. Libraries, UW5784

'OUSE COMMITTEE REPOI

(7)

Date Referred to Committee: January 18, 2011 **FURTHER REFERRALS: Resources**

Date of Committee Action: 2/15/11

The HOUSE SPECIAL COMMITTEE ON FISHERIES considered: **HB 60**

HOUSE BILL NO. 60
"An Act relating to aquatic farm permitting involving geoducks and to geoduck seed transfers between certified hatcheries and aquatic farms."

HB 60 GEODUCK AQUATIC FARMING/SEED TRANSFER

Recommends it be replaced with [ ] HCS *or* [ ] CS *for* _____(_____)
For Senate Bills with new title: [ ] Technical Title [ ] New Title: HCR_____ **[ ] Same Title [ ] New Title**

[ ] attach amendments
[ ] add new referral to _____Committee
[ ] Letter of Intent_____Committee

List of Abbrev for Depts.:
ADM
CED
COR
CRT
EED
DEC
DFG
GOV
DHS
LWF
LAW
LEG
MVA
DNR
DPS
REV
DOT
UA

***NEW* FISCAL NOTES**
*FN# is assigned by Chief Clerk's Office

*FN#	List by Dept(s):	Fiscal	Indet.	Zero
	ADF&G			X
	DNR			X

***PREVIOUS* FISCAL NOTES**

FN#	List by Dept(s):	Fiscal	Indet.	Zero

Signing with recommendations	Printed Last Name	DP	DNP	NR	AM
	HERRON			X	
	Pruitt			X	
	Johnson			X	
	KAWASAKI				
	Austerman	X			
Chair: Peter M Thompson	Thompson	X			
Chair:					

HB 100

<TARGET><BILL>HB 100</BILL><SUBJECT>HB 100</SUBJECT><COMM>HFSH27</COMM></TARGET>

CS FOR HOUSE BILL NO. 100(FSH)

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-SEVENTH LEGISLATURE - SECOND SESSION

BY THE HOUSE SPECIAL COMMITTEE ON FISHERIES

Offered:
Referred:

Sponsor(s): REPRESENTATIVES KAWASAKI, Miller, Kerttula

A BILL

FOR AN ACT ENTITLED

"An Act prohibiting growing or cultivating genetically modified fish in the state."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

*** Section 1.** AS 16.40.210(b) is amended to read:

(b) **Subsection (a) of this** [THIS] section does not restrict

(1) the fishery rehabilitation, enhancement, or development activities of the department;

(2) the ability of a nonprofit corporation that holds a salmon hatchery permit under AS 16.10.400 to sell salmon returning from the natural water of the state, as authorized under AS 16.10.450, or surplus salmon eggs, as authorized under AS 16.10.420 and 16.10.450;

(3) rearing and sale of ornamental finfish for aquariums or ornamental ponds **if** [PROVIDED THAT] the fish are not reared in or released into water of the state.

*** Sec. 2.** AS 16.40.210 is amended by adding a new subsection to read:

(d) A person may not grow or cultivate genetically modified fish in the state.

This subsection does not restrict rearing and sale of ornamental finfish for aquariums or ornamental ponds if the fish are not reared in or released into water of the state. In this subsection, "genetically modified fish" has the meaning given in AS 17.20.040(b)(2).

ALASKA STATE LEGISLATURE

Session:
State Capitol Building,
Room 428
Juneau, Alaska 99801-2186
Phone (907) 465-3004
Fax: (907) 465-2070
Toll Free: (877) 465-3004

Interim:
1292 Sadler Way, Ste. 324
Fairbanks, Alaska 99701
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Toll Free: (877) 465-3004

REPRESENTATIVE STEVE THOMPSON
DISTRICT 10

FAX COVERSHEET

To: Leg. Legal

Fax Number: (907) 465-2029

From: Jane Pierson

Date: 2/24/12 **Number of pages including cover: 1**

Re: CS for HB100 version 27-LS0233\M

Last night the House Special Committee on Fisheries passed out HB100 with one-conceptual amendment as follows:

Page 2, line 3 after "17.20.040" insert "(b)(2)(A)&(B)"

Please go final.

E-Mail: Representative.Steve.Thompson@legis.state.ak.us
Website: www.akrepublicans.org/thompson/

Representative Scott Jiu Wo Kawasaki

Alaska State Legislature District 9 Fairbanks

Sponsor Statement for HB 100

"An Act prohibiting growing or cultivating genetically modified fish in the state."

House Bill 100 (HB100) "An Act Prohibiting Growing or Cultivating Genetically Modified Fish in the State" has been introduced to extend the current prohibition of farming fish to include genetically modified salmon.

In 2010 the FDA began to hear testimony to approve a hybrid Atlantic salmon as the first genetically engineered animal for human consumption. The hybrid Atlantic salmon has been engineered by crossing Chinook salmon growth genes and an antifreeze gene from an eel, the ocean pout. The genes allow the new creation dubbed the AquAdvantage salmon to grow about twice as fast as its natural counterpart. The FDA's consideration for approval of this "frankenfish" is a risky precedent and a threat to Alaska's wild salmon.

Salmon farms in Canada, Europe and South America have been criticized for crowded conditions, fecal contamination, use of chemicals, proliferation of disease and escapees. Atlantic salmon have been caught in Alaska's waters, escaping from neighboring fish farms in British Columbia - many infested with sea lice. They are considered an invasive species by the Alaska Department of Fish and Game. As Alaskans we must do everything to keep these foreign invaders out of Alaskan waters.

Alaska's fishing industry is valued at 1.5 billion annually, and $3.6 billion wholesale, according to Alaska Department of Fish and Game. Some studies have shown that AquAdvantage fish could eliminate wild populations within 30 years and poses real environmental risks to the sustainability of the fish, and the pocketbooks of Alaskans. HB 100 will prohibit the growth, sale or release of genetically engineered fish in Alaska, keeping Alaska's salmon safe.

This legislation does not restrict Alaska Department of Fish and Game activities including fishery rehabilitation, enhancement, and development. HB 100 also allows the rearing and sale of ornamental finfish for aquariums or ponds as long as the fish are not released in Alaskan waters.

###

FISCAL NOTE

STATE OF ALASKA cost ≠ codes
2012 LEGISLATIVE SESSION

Bill Version **HB 100 \M**
Fiscal Note Number
Publish Date

Identifier (file name) HB 100-DFG-CO-02-17-12
Title BAN CULTIVATION OF GENETICALLY MOD. FISH
Sponsor REPRESENTATIVE KAWASAKI, Miller, Kerttula
Requester House Special Committee on Fisheries

Dept. Affected ADF&G
Appropriation Administration and Support
Allocation Commissioner's Office
OMB Component Number 2175

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	FY13 Appropriation Requested	Included in Governor's FY13 Request	Out-Year Cost Estimates				
OPERATING EXPENDITURES	**FY13**	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**
Personal Services							
Travel							
Services							
Commodities							
Capital Outlay							
Grants, Benefits							
Miscellaneous							
TOTAL OPERATING	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

FUND SOURCE		(Thousands of Dollars)						
1002	Federal Receipts							
1003	GF Match							
1004	GF							
1005	GF/Prgm (DGF)							
1037	GF/MH (UGF)							
1178	temp code (UGF)							
TOTAL		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

POSITIONS							
Full-time							
Part-time							
Temporary							

CHANGE IN REVENUES							

Estimated SUPPLEMENTAL (FY12) operating costs _____ *(separate supplemental appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Estimated CAPITAL (FY13) costs _____ *(separate capital appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Why this fiscal note differs from previous version (if initial version, please note as such)

This is the initial fiscal note for House Bill 100.

Prepared by Ben Mulligan, Legislative Liaison
Division Commissioner's Office
Approved by Kevin Brooks, Administrative Services Director
Department of Fish and Game

Phone 907-465-6137
Date/Time 2/17/2012 8:54PM
Date 2/17/2012

(Revised 8/17/2011 OMB)

FISCAL NOTE

STATE OF ALASKA
2012 LEGISLATIVE SESSION

BILL NO. HB 100 \M

Analysis

House Bill 100 prohibits the growing or cultivating of genetically modified fish in the state. After consultation with the Division of Commercial Fisheries and Sport Fish Division it was determined that the passage of this bill would not have a fiscal impact upon any of their programs and/or operations.

THE DAILY CALLER

A higher standard for GMOs

By Randall Mayes 6:36 PM 12/09/2011

ADVERTISEMENT

The Food and Drug Administration has reportedly finished its evaluation of the environmental and health impacts for the first genetically modified animal food source proposed for sale in the U.S. market.

Massachusetts-based AquaBounty Technologies has spent over $60 million and almost 20 years developing the AquAdvantage Salmon. Scientists transplanted DNA from two other fish species that will enable the salmon to reach maturity in 18 months rather than the usual 36 months. The FDA has found no major issues with the genetically modified salmon. However, the report is not yet public. The findings are now under review by the White House's Office of Management and Budget.

In 2010, the FDA issued a preliminary finding that declared the bioengineered salmon to be safe to humans and the environment. In response, Congressmen Dennis Kucinich (D-OH), Peter DeFazio (D-OR) and Mike Thompson (D-CA) led other members of Congress in halting its approval based on, in their opinion, a flawed approval process. A congressional letter recommended that the FDA perform a more thorough review regarding the salmon's possible effects on the environment and human health.

On behalf of a coalition of over 50 organizations consisting of consumer and environmental groups, the Center for Food Safety is opposing final FDA approval and has led a campaign to stop the fish from entering U.S. markets.

It's not genetic engineering, a process of recombining DNA from two different species, that concerns the activists. Currently, over 80 percent of corn and 90 percent of soybeans in the U.S. are genetically modified. Genetic engineering has also led to many life-saving drugs and is extremely important in medical research, especially for combating deadly influenza viruses. Rather, consumer activists are concerned that the bioengineered salmon could have novel expressed proteins that are allergenic to humans.

Environmental groups are concerned that the genetically engineered salmon might escape and breed with wild populations, leading to the native populations' extinction.

To address the mixing issue, AquaBounty has created females with three sets of chromosomes, making them sterile. Also, the company plans to raise the fish in isolated tanks that are double-barricaded, to minimize the chance that some of the genetically modified salmon will escape into the wild.

James Greenwood, the president of the Biotechnology Industry Organization, would like to see an equal emphasis on risks and benefits of GMOs in the approval process. Besides providing a boost to the biotechnology industry and reducing its carbon footprint, GMOs provide a solution to the over-fishing that inevitably arises from a burgeoning population.

Over the years, genetically modified plants have eased food shortages, addressed nutritional deficiencies and generally helped mankind. Yet, because of irrational public opposition to GMOs, the European Union banned imports of all genetically modified foods and feed products between June 1998 and August 2003. This ban

cost American farmers roughly $300,000,000 a year.

Society is willing to tolerate some technologies despite the dangers they pose. For instance, each year 40,000 people die in automobile accidents and 106,000 people die as the result of side effects from medications. But biotechnology has never killed anyone. Clearly, political activists are holding biotechnology to a higher standard.

Randall Mayes is a senior fellow with STATS at George Mason University. He covers science as it relates to business, politics, and culture and is a technology policy analyst specializing in issues related to genomics, nanotechnology, and synthetic biology. His new book Revolutions: Paving the Way for the Bioeconomy is scheduled for release with Logos Press in 2012.

Article printed from The Daily Caller: **http://dailycaller.com**

URL to article: **http://dailycaller.com/2011/12/09/a-higher-standard-for-gmos/**

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Alaska Department of Fish and Game

Commercial Fisheries
Information by Fishery

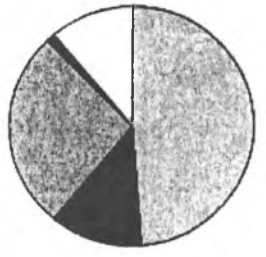
Fishery Overview



Salmon | Groundfish | Shellfish | Herring | Dive Fisheries

Alaska supports one of the most productive commercial fishing economies in the world. Fishermen typically receive well over $1 billion for their catch; while the value of Alaskan seafood sold at first wholesale easily tops $3 billion. The total economic impact of the seafood industry (direct, indirect, and induced efforts) in Alaska was estimated at 4.6 billion in 2009. Subsistence and personal use fisheries managed by the Division of Commercial Fisheries feed thousands of Alaskans.

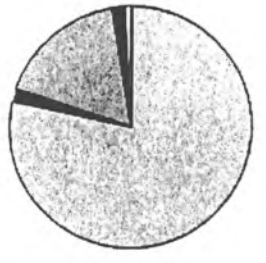
Average Commercial Fishing Exvessel Values, by Fishery, 2006-2010



- Groundfish* = $823 Million
- Shellfish = $201 Million
- Dive = $8 Million
- Salmon = $448 Million
- Herring = $19 Million
- Halibut = $190 Million

*Includes federally managed groundfish

Average Commercial Fishing Harvests, by Fishery, 2006-2010



- Groundfish* = 4.0 Billion lbs.
- Shellfish = 84.2 Million lbs.
- Dive = 2.9 Million lbs.
- Salmon = 879.8 Million lbs.

Commercially important species of seafood from Alaska include five species of salmon, five species of crab, walleye pollock, Pacific halibut, Pacific cod, sablefish, herring, four species of shrimp, several species of flatfish and rockfish, lingcod, geoducks, sea cucumbers, and sea urchins. Sixty-four aquatic farms also produce oysters, littleneck clams, and geoduck clams.

Salmon is the most valuable commercial fishery managed by the State of Alaska. Commercial fisheries for salmon extend from Ketchikan to Kotzebue, as well as deep into the interior of Alaska along the Yukon and Kuskokwim rivers. Salmon are harvested using a variety of fishing gear and more Alaskans are employed in harvesting and processing salmon than in any other commercial fishery.

Bristol Bay is the largest sockeye salmon fishery in the world and the most valuable single salmon fishery in Alaska. Pink salmon, the most numerous salmon species harvested in Alaska, often produce statewide harvests of over 100 million fish. Southeast Alaska, Prince William Sound, the Alaska Peninsula, and Kodiak are the major pink salmon producing areas.

Shellfish is the second most valuable fishery managed by the state of Alaska, with the largest shellfish harvests occurring in the Bering Sea. These fisheries are managed by the Alaska Department of Fish and Game (ADF&G) on a seasonal basis using a total allowable catch. This ensures sustainable wild stocks and harvests under a fishery management plan adopted by the North Pacific Fisheries Management Council (Council) that delegates specific management authorities to the state. Smaller inshore fisheries for shellfish, managed exclusively by the state, also occur.

State-managed Groundfish and herring fisheries add to Alaska's seafood

■Herring = 86.8 Million lbs.
□Halibut = 48.7 Million lbs.
* includes federally managed groundfish

economy. These fisheries are important because they diversify the products that Alaskan processors can market and lengthen the time fishermen and processing plants operate. The sablefish fishery in particular represents one of the highest valued finfish per pound in southeast Alaska.

For some species, e.g. demersal shelf rockfish, the federal government and ADF&G share jurisdiction in management of fisheries outside state waters. The North Pacific Fisheries Management Council (NPFMC) approves fishery management plans for species listed under the federal management plan, but the ADF&G commissioner is a voting member of the NPFMC, and ADF&G Division of Commercial Fisheries staff attend the NPFMC Plan Team meetings. As a result, the State of Alaska actively contributes to the science and management discussions that influence federal fisheries policy.

Additional Publications

- Commercial Fishing Seasons in Alaska
  2-page letter-sized (*PDF 391 kB*) | 2-page legal-sized (*PDF 350 kB*)
- Fishing Vessels in Alaska (*PDF 182 kB*)
- Sustaining Alaska's Fisheries: Fifty Years of Statehood
- 2010 Alaska Average Price Per Pound - All Species (*PDF 761 kB*)

Adobe Acrobat PDF files require a free viewer available directly from Adobe.

SPECIES	AREA	PRICE/LB
HALIBUT		
halibut, Pacific	Alaska Peninsula	$4.49
halibut, Pacific	Cook Inlet	$5.17
halibut, Pacific	Dutch Harbor	$4.55
halibut, Pacific	EEZ	$4.88
halibut, Pacific	Juneau/Yakutat	$4.96
halibut, Pacific	Ketchikan/Craig	$4.95
halibut, Pacific	Kodiak	$4.82
halibut, Pacific	Petersburg/Wrangell	$5.00
halibut, Pacific	Prince William Sound	$4.90
halibut, Pacific	Sitka/Pelican	$4.81
HERRING		
herring, Pacific	Bristol Bay	$0.07
herring, Pacific	Ketchikan/Craig	$0.65
herring, Pacific	Kodiak	$0.16
herring, Pacific	Sitka/Pelican	$0.39
OTHER INVERTEBRATES		
clam, Pacific geoduck	Ketchikan/Craig	$6.61
octopus, North Pacific	Kodiak	$0.45
sea cucumber	Ketchikan/Craig	$2.67
sea cucumber	Sitka/Pelican	$2.64
squid, majestic	Dutch Harbor	$0.05
squid, majestic	Kodiak	$0.05

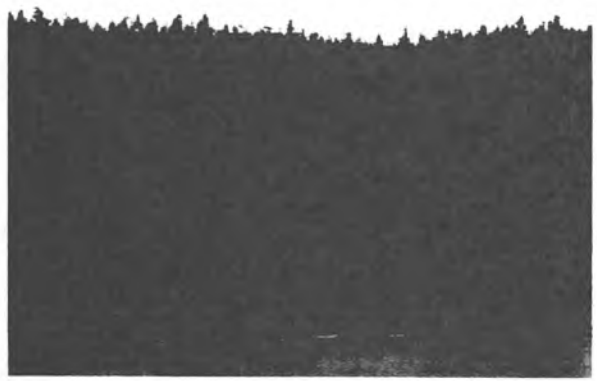


SPECIES	AREA	PRICE/LB
SALMON		
salmon, chinook	Alaska Peninsula	$1.02
salmon, chinook	Bristol Bay	$1.18
salmon, chinook	Cook Inlet	$3.02
salmon, chinook	Juneau/Yakutat	$4.66
salmon, chinook	Ketchikan/Craig	$4.10
salmon, chinook	Kodiak	$0.64
salmon, chinook	Petersburg/Wrangell	$3.77
salmon, chinook	Prince William Sound	$5.41
salmon, chinook	Sitka/Pelican	$4.55
salmon, chum	Alaska Peninsula	$0.41
salmon, chum	Bristol Bay	$0.28
salmon, chum	Cook Inlet	$0.65
salmon, chum	Juneau/Yakutat	$0.73
salmon, chum	Ketchikan/Craig	$0.73
salmon, chum	Kodiak	$0.56
salmon, chum	Petersburg/Wrangell	$0.75
salmon, chum	Prince William Sound	$0.81
salmon, chum	Sitka/Pelican	$0.86
salmon, coho	Alaska Peninsula	$0.50
salmon, coho	Bristol Bay	$0.66
salmon, coho	Cook Inlet	$0.96
salmon, coho	Juneau/Yakutat	$1.25
salmon, coho	Ketchikan/Craig	$1.18
salmon, coho	Kodiak	$0.80
salmon, coho	Petersburg/Wrangell	$1.09
salmon, coho	Prince William Sound	$1.28
salmon, coho	Sitka/Pelican	$1.55
salmon, pink	Alaska Peninsula	$0.38
salmon, pink	Bristol Bay	$0.36
salmon, pink	Cook Inlet	$0.30
salmon, pink	Juneau/Yakutat	$0.36
salmon, pink	Ketchikan/Craig	$0.39
salmon, pink	Kodiak	$0.44
salmon, pink	Petersburg/Wrangell	$0.44
salmon, pink	Prince William Sound	$0.40
salmon, pink	Sitka/Pelican	$0.41
salmon, sockeye	Alaska Peninsula	$1.23
salmon, sockeye	Bristol Bay	$1.07
salmon, sockeye	Cook Inlet	$1.67
salmon, sockeye	Juneau/Yakutat	$1.67
salmon, sockeye	Ketchikan/Craig	$1.65
salmon, sockeye	Kodiak	$1.42
salmon, sockeye	Petersburg/Wrangell	$1.78
salmon, sockeye	Prince William Sound	$2.02
salmon, sockeye	Sitka/Pelican	$1.58
SHRIMP		
shrimp, spot	Juneau/Yakutat	$7.81
shrimp, spot	Ketchikan/Craig	$5.73
shrimp, spot	Prince William Sound	$6.50

2010
ALASKA FISHERY EXVESSEL PRICES

Division of Commercial Fisheries
Jeff Regnart, Director
1255 W. 8th Street • P. O. Box 115526 • Juneau, AK 99811-5526
(907) 465-4210 • www.cf.adfg.state.ak.us





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SPECIES	AREA	PRICE/LB
CRAB		
crab, blue king	Bering Sea	$4.97
crab, blue king	Dutch Harbor	$4.96
crab, Dungeness	Dutch Harbor	$1.70
crab, Dungeness	Juneau/Yakutat	$1.75
crab, Dungeness	Kodiak	$1.90
crab, Dungeness	Petersburg/Wrangell	$1.71
crab, golden (brown) king	Dutch Harbor	$3.73
crab, golden (brown) king	Juneau/Yakutat	$4.42
crab, golden (brown) king	Petersburg/Wrangell	$4.87
crab, red king	Dutch Harbor	$7.42
crab, red king	Kodiak	$7.35
crab, Tanner, bairdi	Dutch Harbor	$2.10
crab, Tanner, bairdi	Kodiak	$1.58
crab, Tanner, bairdi	Sitka/Pelican	$1.80
crab, Tanner, snow (opilio)	Bering Sea	$1.25
crab, Tanner, snow (opilio)	Dutch Harbor	$1.34
GROUNDFISH		
bocaccio	Ketchikan/Craig	$0.12
cod, Pacific (gray)	Alaska Peninsula	$0.25
cod, Pacific (gray)	Cook Inlet	$0.31
cod, Pacific (gray)	Dutch Harbor	$0.25
cod, Pacific (gray)	EEZ	$0.27
cod, Pacific (gray)	Juneau/Yakutat	$0.40
cod, Pacific (gray)	Ketchikan/Craig	$0.31
cod, Pacific (gray)	Kodiak	$0.26
cod, Pacific (gray)	Petersburg/Wrangell	$0.13
cod, Pacific (gray)	Prince William Sound	$0.29
cod, Pacific (gray)	Sitka/Pelican	$0.49
flounder, arrowtooth	EEZ	$0.02
flounder, arrowtooth	Kodiak	$0.05
flounder, starry	Kodiak	$0.07
lingcod	Cook Inlet	$0.78
lingcod	Juneau/Yakutat	$1.22
lingcod	Ketchikan/Craig	$0.80
lingcod	Kodiak	$0.46
lingcod	Petersburg/Wrangell	$0.74
lingcod	Prince William Sound	$0.96
lingcod	Sitka/Pelican	$1.01
perch, Pacific ocean	Dutch Harbor	$0.02
perch, Pacific ocean	EEZ	$0.04
perch, Pacific ocean	Kodiak	$0.12
pollock, walleye	Alaska Peninsula	$0.16
pollock, walleye	Dutch Harbor	$0.13
pollock, walleye	EEZ	$0.19
pollock, walleye	Kodiak	$0.18
prowfish	EEZ	$0.04
rockfish, black	Cook Inlet	$0.50
rockfish, black	Juneau/Yakutat	$0.27
rockfish, black	Ketchikan/Craig	$0.33
rockfish, black	Kodiak	$0.39
rockfish, black	Prince William Sound	$0.35
rockfish, black	Sitka/Pelican	$0.34
rockfish, canary	Juneau/Yakutat	$0.24
rockfish, canary	Ketchikan/Craig	$0.27
rockfish, canary	Sitka/Pelican	$0.33
rockfish, China	Cook Inlet	$0.37
rockfish, dark	Cook Inlet	$0.38
rockfish, dusky	Cook Inlet	$0.29
rockfish, dusky	EEZ	$0.04
rockfish, dusky	Juneau/Yakutat	$0.18
rockfish, dusky	Kodiak	$0.13
rockfish, dusky	Sitka/Pelican	$0.34
rockfish, northern	EEZ	$0.04
rockfish, northern	Kodiak	$0.11
rockfish, quillback	Cook Inlet	$0.48
rockfish, quillback	EEZ	$0.39
rockfish, quillback	Juneau/Yakutat	$0.31
rockfish, quillback	Ketchikan/Craig	$0.89
rockfish, quillback	Petersburg/Wrangell	$0.30
rockfish, quillback	Prince William Sound	$0.50
rockfish, quillback	Sitka/Pelican	$0.75
rockfish, redbanded	Cook Inlet	$0.31
rockfish, redbanded	Juneau/Yakutat	$0.26
rockfish, redbanded	Ketchikan/Craig	$0.30
rockfish, redbanded	Kodiak	$0.10
rockfish, redbanded	Petersburg/Wrangell	$0.27
rockfish, redbanded	Sitka/Pelican	$0.34
rockfish, redstripe	Kodiak	$0.11
rockfish, redstripe	Sitka/Pelican	$0.30
rockfish, rougheye	Cook Inlet	$0.30
rockfish, rougheye	EEZ	$0.46
rockfish, rougheye	Juneau/Yakutat	$0.26
rockfish, rougheye	Ketchikan/Craig	$0.28
rockfish, rougheye	Kodiak	$0.26
rockfish, rougheye	Petersburg/Wrangell	$0.26
rockfish, rougheye	Prince William Sound	$0.44
rockfish, rougheye	Sitka/Pelican	$0.35
rockfish, shortraker	Cook Inlet	$0.31
rockfish, shortraker	EEZ	$0.29
rockfish, shortraker	Juneau/Yakutat	$0.30
rockfish, shortraker	Ketchikan/Craig	$0.29
rockfish, shortraker	Kodiak	$0.23
rockfish, shortraker	Petersburg/Wrangell	$0.26
rockfish, shortraker	Prince William Sound	$0.36
rockfish, shortraker	Sitka/Pelican	$0.33
rockfish, silvergray	Cook Inlet	$0.45
rockfish, silvergray	Juneau/Yakutat	$0.24
rockfish, silvergray	Ketchikan/Craig	$0.30
rockfish, silvergray	Sitka/Pelican	$0.33
rockfish, thornyhead (idiots)	Alaska Peninsula	$1.17
rockfish, thornyhead (idiots)	Cook Inlet	$1.13
rockfish, thornyhead (idiots)	Dutch Harbor	$1.42
rockfish, thornyhead (idiots)	EEZ	$0.85
rockfish, thornyhead (idiots)	Juneau/Yakutat	$0.97
rockfish, thornyhead (idiots)	Ketchikan/Craig	$1.04
rockfish, thornyhead (idiots)	Kodiak	$0.59
rockfish, thornyhead (idiots)	Petersburg/Wrangell	$1.02
rockfish, thornyhead (idiots)	Prince William Sound	$0.83
rockfish, thornyhead (idiots)	Sitka/Pelican	$1.24
rockfish, tiger	Juneau/Yakutat	$0.21
rockfish, yelloweye (red snapper)	Cook Inlet	$0.73
rockfish, yelloweye (red snapper)	EEZ	$0.73
rockfish, yelloweye (red snapper)	Juneau/Yakutat	$0.93
rockfish, yelloweye (red snapper)	Ketchikan/Craig	$1.17
rockfish, yelloweye (red snapper)	Kodiak	$0.38
rockfish, yelloweye (red snapper)	Petersburg/Wrangell	$1.05
rockfish, yelloweye (red snapper)	Prince William Sound	$0.63
rockfish, yelloweye (red snapper)	Sitka/Pelican	$1.11
sablefish (blackcod)	Alaska Peninsula	$5.89
sablefish (blackcod)	Cook Inlet	$5.82
sablefish (blackcod)	Dutch Harbor	$5.63
sablefish (blackcod)	EEZ	$5.83
sablefish (blackcod)	Juneau/Yakutat	$5.97
sablefish (blackcod)	Ketchikan/Craig	$5.46
sablefish (blackcod)	Kodiak	$5.56
sablefish (blackcod)	Petersburg/Wrangell	$5.91
sablefish (blackcod)	Prince William Sound	$5.61
sablefish (blackcod)	Sitka/Pelican	$5.87
skate, big	Kodiak	$0.29
skate, general	EEZ	$0.33
skate, longnose	Kodiak	$0.28
sole, butter	Kodiak	$0.14
sole, Dover	Kodiak	$0.11
sole, English	Kodiak	$0.14
sole, flathead	EEZ	$0.02
sole, flathead	Kodiak	$0.12
sole, rex	Dutch Harbor	$0.03
sole, rex	EEZ	$0.02
sole, rex	Kodiak	$0.29
sole, rock	EEZ	$0.02
sole, rock	Kodiak	$0.18
sole, sand	Cook Inlet	$0.78
sole, sand	EEZ	$0.72
sole, sand	Sitka/Pelican	$1.02

Alaska Department of Fish and Game

Information by Fishery
Commercial Salmon Fisheries

Overview



The salmon returning to Alaskan stream and rearing in Alaskan waters are the basis for one of Alaska's most important industries and underpin a traditional subsistence lifestyle in rural portions of the State. From 2000 – 2004, the average harvest of salmon sold by commercial fishermen in Alaska was almost 157 million fish (about 742 million pounds). The value of the commercial harvest varies both with the size of the runs and with foreign currency exchange rates. Average annual value of the 2000 –2004 harvest was in excess of $230 million (Recent 5-year average harvests, value, and permits fished). Because of the magnitude of commercial fisheries for salmon, state biologists collect extensive information and statistics for management decisions. Alaska also has very important sport and subsistence fisheries for salmon. Many Alaskans depend heavily on subsistence-caught salmon for food and cultural purposes. Fishery management plans give top priority to the subsistence use of fish resources.

Navigate to area pages

- Southeast Region
- Central Region
- Arctic-Yukon-Kuskokwim
- Westward Region

Salmon Species

All Species | Chinook | Chum | Coho | Pink | Sockeye

Salmon General Information

Five Pacific salmon species spawn and have directed fisheries in Alaska: *Oncorhynchus nerka* commonly known as sockeye or red salmon; *O. gorbuscha* commonly known as pink salmon; *O. keta* known as chum or dog salmon; *O. tshawytscha* commonly called king or Chinook salmon; and *O. kisutch* commonly known as coho or silver salmon. Two other Pacific salmon species spawn exclusively in Asian systems and are not caught in Alaskan waters.

Commercial Salmon Boat Types

Commercial Fishing Boats | Purse Seiner | Gillnetter | Troller

Commercial Fishing Boats

There are three types of commercial salmon boats. Purse Seiners, Gillnetters, and Trollers.

adn.com
Anchorage Daily News

Frankenfish a disaster for Alaska salmon

COMPASS: ***Other points of view***

By DAVE KUBIAK

(02/07/11 19:48:12)

Alaska Sens. Mark Begich and Lisa Murkowski are on the right track opposing the approval of transgenic salmon, or "Frankenfish," on at least two levels: economic and biological.

On the economic level, the approval of Frankenfish will have huge potential impacts on Alaska's wild salmon markets, which are at this point still recovering their profitability from the setbacks of the Exxon Valdez spill, which caused a huge loss of market share to farmed salmon. Yes, it takes that long to recover your market after having it torpedoed by an oil spill or by the confusion over the safety of a product. Confusion over safety and the inconsistent labeling of fish as to origin, species, or provenance leads consumers to buy something else, like chicken.

Alaska's salmon is a huge part of our state's economy, with hundreds of millions of dollars invested in boats, gear, processing plants, and other infrastructure. Guarding against Frankenfish is important to Alaska.

On the biological level, Frankenfish, if approved as the first transgenic agricultural product, will have far-reaching and unknown consequences for nature and for consumers. Mixing the genes of Atlantic salmon with that of an eelpout to promote accelerated growth (10 times faster than normal) is an "Island of Dr. Moreau" experiment that deserves much more scrutiny for the health of our environment and for the well being of consumers.

We have heard of the various doctored chemicals imported in foods and medicines, of the dangers of plasticizers in our bottles and food containers; what we do not need now are unknown and unproven biologicals in our food supply. Approval of Frankenfish will take us into the world of experimentation on new and recombined growth enzymes and genes; we need assurance that these biological compounds will not lead to effects on human health.

We are assured by the developer that these fish, so engineered, are such freaks of nature that they cannot survive in the wild, and yet we are supposed to accept them as wholesome food.

Support Sens. Begich and Murkowski in blocking approval of transgenic Frankenfish for Alaska's economic and public health.

Dave Kubiak is a former Kodiak salmon fisherman and current chairman of the Alaska Marine Conservation Council.

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FDA ignored FWS and NOAA biological opinions on GMO salmon?

Alaska Dispatch

Documents released in October indicate the The U.S. Fish and Wildlife Service and NOAA's National Marine Fisheries Service issued biological opinions that growing genetically modified salmon in marine net pens would pose a threat to wild Atlantic salmon protected under the Endangered Species Act and should be prohibited. A FOIA request by the Center for Food Safety, a non-profit group which says its mission is "to protect human health and the environment by curbing the use of harmful food production technologies and by promoting organic and other forms of sustainable agriculture," resulted in the release of biological opinions issued by the agencies in 2003 and 2001, as well supplemental documents. The documents indicate that the FDA was aware of the opinions as it conducted recent hearings over AquaBounty's genetically modified AquAdvantage salmon. Read more of the non-profit's statement concerning the documents, and find links to the documents themselves, here.

Read more of the Dispatch

- *Alaska salmon bake, a Utah tradition for 56 years*
- *Parnell speaks in rural Alaska*
- *Alaska Democratic Party headquarters vandalized*
- *Muse at the Anchorage Museum*
- *Bear outside tent thought to be culprit*

COMMITTEE ON ARMED SERVICES

COMMITTEE ON
COMMERCE, SCIENCE, AND TRANSPORTATION

MARK BEGICH
ALASKA

COMMITTEE ON VETERANS' AFFAIRS

COMMITTEE ON THE BUDGET

United States Senate

WASHINGTON, DC 20510

November 17, 2010

The Editor
Time
Time & Life Building, Rockefeller Center
New York, NY 10020-1393

Via email to: letters@time.com

To the Editor:

Time's editors must have been watching too many mad scientist movies if they consider genetically-engineered salmon among the 50 best inventions of the year (Nov. 22, page 73).

Despite the supposed advantage of growing twice as fast as wild salmon, serious concerns remain about the environmental and human health impacts of these gene-spliced fish. There are glaring deficiencies in the Food and Drug Administration's closed-door review process and public opposition to eating these creatures is so strong proponents are fearful of labeling their product what it is: genetically-engineered.

Want more salmon? Here's a better idea: protect its natural habitat, maintain water quality and manage wild stocks for sustainability. That's what Alaska has done for over 50 years and now returns of wild salmon are at historically high levels. And wild salmon taste a lot better than anything you'll ever cook up in a laboratory.

Let's leave "Frankenfish" on the operating table and not the dinner table.

Sincerely,

Mark Begich
United States Senator

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Canadian 'Frankenfish' Named One of 2010 Top Inventions

FDA could soon approve genetically modified salmon, lawsuit threatened

By Joan Delaney
Epoch Times Staff

Last Updated: Dec 30, 2010 *Created:* Dec 30, 2010



Salmon wait to be processed at a fish factory in Chile. A controversial fast-growing genetically engineered salmon developed in Canada could soon be approved for sale in the U.S. (Francisco Negroni/AFP/Getty Images)

A controversial fast-growing genetically engineered salmon developed in Canada has been named one of the 50 best inventions of 2010 in the online version of Time Magazine.

U.S. biotech company AquaBounty Technologies Inc.'s GE salmon—dubbed "Frankenfish" by environmentalists—could soon be approved for sale in the U.S.

AquaBounty plans to produce the GE salmon eggs at its facility on Prince Edward Island, then ship them to Panama to be grown and processed in controlled facilities.

The company is currently seeking approval from the Food and Drug Administration (FDA) to sell the salmon in the U.S. If it gets the green light, the salmon, called AquAdvantage, will be the first GE animal ever approved for human consumption.

AquaBounty engineered Atlantic salmon to grow faster by inserting a growth hormone from Chinook salmon and genetic material from the eel-like ocean pout, which can survive in extremely cold waters. The technology was developed by scientists at Newfoundland's Memorial University.

"The problem is that salmon make bad farm animals: it takes 3 lb. (1.36 kilos) of feed to grow 1

lb. (.45 kilo) of salmon," Time said. "AquAdvantage Atlantic salmon can grow twice as fast, making them easier to farm."

But opposition to the transgenic salmon—from environmental and consumer groups, food safety advocates, and commercial and recreational fisheries associations, among others—has been growing on both sides of the border.

Just last week, the U.S. chapter of Trout Unlimited said it is prepared to take legal action if the FDA approves AquAdvantage for sale.

Trout Unlimited CEO Chris Wood says the FDA is not equipped to estimate the environmental risk posed by GE animals and doesn't have any fisheries scientists—"and that's who we need looking at this now."

Related Articles

- Has the FDA Already Decided About Genetically Engineered Salmon? Part 2
- 'Frankenfish,' Genetically Modified Salmon, Face Review by FDA Panel

"We are not a litigious organization, but we are just so profoundly concerned that while the FDA may have done a great job in terms of looking at the potential impacts on human health of genetically modified salmon, the FDA is patently unqualified to be able to look at the potential environmental effects of allowing these fish to be brought to market."

'Enviropig' Next?

The FDA declared in September that the genetically altered salmon are safe to eat and "are not expected to have a significant impact" on the environment.

AquaBounty has said there will be tight regulations around marketing the salmon. But that's not enough, says Wood.

"Once these get on the market and other countries get a hold of them and other companies get a hold of them, there's no guarantees and there's no assurances or safeguards that they won't be released into the environment, either inadvertently or intentionally.

"We want to see the affects of that almost inevitability very carefully studied and researched before the government makes a decision."

Biotech opponents in Canada fear that if AquaBounty's salmon is approved for the U.S. market, Canadians will be the next to find unlabelled GE salmon on their store shelves—followed by the GE "Enviropig" engineered by scientists at the University of Guelph. The university has asked Health Canada to approve Enviropig for human consumption.

A coalition representing fisheries and oceans conservation, environmental, and social justice groups—60 organizations in all—is working to block the GE salmon completely in Canada.

The coalition has released a statement of

"categorical objection" to the raising of GE fish and fish eggs and has called on Environment Minister John Baird to take action to prevent the eggs from being produced in Canada.

"There's always going to be a risk, and the consequences of an accident are so huge that the risks are just too big to consider releasing this GE salmon." Lucy Sharratt

Lucy Sharratt of the Canadian Biotechnology Action Network calls the technology dangerous and says the GE salmon pose a "profound threat" to wild fish if they escape.

"There's always going to be a risk, and the consequences of an accident are so huge that the risks are just too big to consider releasing this GE salmon. Consumers don't want it. Even the aquaculture industry doesn't want it. So it's not wanted and yet it represents a huge risk to an endangered wild fish population."

Minimal Risk of Escape

AquaBounty, which does not yet have permission from Environment Canada to commercially produce its salmon eggs in P.E.I., says the likelihood of escape is minimal due to stringent containment measures at its land-based facilities in both P.E.I. and Panama.

If an accidental escape did occur, "environmental conditions at the facilities are such that survival of the organisms would be highly unlikely," the company said in its Environmental Risk Assessment.

"We believe the economic and environmental benefits of our salmon will very effectively help to meet the demand for food from the growing world population," said Ronald Stotish, president and CEO of AquaBounty, in an August press release.

Ruth Salmon, spokeswoman for the Canadian Aquaculture Industry Alliance, says the aquaculture industry doesn't support producing genetically engineered salmon for human consumption.

"We have done quite a bit of research and the market doesn't want [GE salmon], our customers don't want it," Salmon told the Vancouver Sun.

"The aquaculture industry knows that if genetically engineered salmon are approved, consumers will start rejecting farmed salmon as a means of avoiding genetically engineered salmon," says Sharratt.

"There's going to be a huge consumer backlash and it's the aquaculture industry that's going to feel that when consumers stop buying farmed salmon."

Related Articles

- Has the FDA Already Decided About Genetically Engineered Salmon? Part 2
- 'Frankenfish,' Genetically Modified Salmon, Face Review by FDA Panel

A U.S. survey conducted in September found that, overall, 78 percent of adults believe the FDA

should not approve GE salmon for human consumption, compared to 16 percent who want to see it approved.

A group of 12 U.S. organizations, including the Union of Concerned Scientists, Greenpeace, and the Ocean Conservancy, has sent a letter to President Barack Obama and the FDA demanding that the agency conduct a rigorous environmental impact study before deciding whether to approve the GE salmon.

FDA Hears Arguments on 'Frankenfish'

Sep 20, 2010 – 2:20 PM

Mary Clare Jalonick

WASHINGTON (Sept. 20) -- Genetically engineered salmon that grows twice as fast as the conventional fish appears to be safe, an advisory committee told the Food and Drug Administration Monday. But they argued that more testing may be needed before it is served on the nation's dinner tables.

If the FDA approves the sale of the salmon, it will be the first time the government allows such modified animals to be marketed for human consumption. The panel was convened by the agency to look at the science of the fish and make recommendations on its safety and environmental impact.

Ron Stotish, chief executive of the Massachusetts company that created the salmon, AquaBounty, said at Monday's hearing that his company's fish product is safe and environmentally sustainable.

FDA officials have largely agreed with him, saying that the salmon, which grows twice as fast as its conventional "sisters," is as safe to eat as the traditional variety. But they have not yet decided whether to approve the request.

Critics call the modified salmon a "frankenfish" that could cause allergies in humans and the eventual decimation of the wild salmon population. Representatives from consumer, environmental and food safety groups asked the agency to decline the company's application to market the fish, saying it is untested.

The advisory committee agreed with the FDA that the company has presented compelling evidence that the fish is safe. But members raised several concerns about the data, saying many of the sample sizes were too small and how healthy the fish will be after many years of breeding.

It is still unclear whether the public will have an appetite for the fish if it is approved. Genetic engineering is already widely used for crops, but the government until now has not considered allowing the consumption of modified animals. Although the potential benefits - and profits - are huge, many people have qualms about manipulating the genetic code of other living creatures.

Part of the hearing focuses on labeling of the fish. It is possible that if the modified salmon is approved, consumers would not even know they were eating it. Current FDA regulations require modified foods to be labeled as such only if the food is substantially different from the conventional version, and the agency has said that the modified salmon is essentially the same as the Atlantic salmon.

If approved, the fish could be in grocery stores in two years, the company estimates.

Approval would open the door for a variety of other genetically engineered animals, including a pig that is being developed in Canada or cattle that are resistant to mad cow disease. Each would have to be individually approved by the FDA.

"For future applications out there the sky's the limit," said David Edwards of the Biotechnology Industry Association. "If you can imagine it, scientists can try to do it."

AquaBounty says it would be the first in the world to market genetically engineered fish. The company submitted its first application for FDA approval in 1995, but the agency did not decide until two years ago to consider applications for genetically engineered animals - a move seen as a breakthrough by the biotechnology industry.

Genetically engineered - or GE - animals are not clones, which the FDA has already said are safe to eat. Clones are copies of an animal. In GE animals, the DNA has been altered to produce a desirable characteristic.

In the case of the salmon, AquaBounty has added a growth hormone from a Chinook salmon that allows the fish to produce growth hormone all year long. The engineers were able to keep the hormone active by using another gene from an eel-like fish called an ocean pout that acts like an on switch for the hormone, according to the company. Conventional salmon produce the growth hormone only some of the time.

In documents released ahead of the hearing, the FDA said there were no biologically relevant differences between the engineered salmon and conventional salmon, and there is a reasonable certainty of no harm from its consumption. FDA scientists said Monday there are very few differences between the modified and conventional fish.

Critics have two main concerns: The safety of the food to humans and the salmon's effect on the environment.

Because the altered fish has never been eaten before, they say, it could include dangerous allergens, especially because seafood is highly allergenic. They also worry that the fish will escape and intermingle with the wild salmon population, which is already endangered.They would grow fast and consume more food to the detriment of the conventional wild salmon, the critics fear.

The FDA tried to allay both of those concerns Monday, saying the fish shouldn't cause any allergies not already found in conventional salmon and that there is little chance they could escape.

Critics speaking at the meeting said they were concerned about the unintended consequences of approval, arguing the FDA is relying on too little data.

Wenonah Hauter, director of the advocacy group Food & Water Watch, said the FDA process is inadequate because it allows the company to keep some proprietary information private.

Modified foods are regulated under the same process used for animal drugs.

"With all due respect, we don't believe a veterinary advisory committee is the appropriate place to discuss these food safety issues," Hauter told the panel.

European nations have been much more cautious in embracing engineered foods. Ruediger Rosenthal, a spokesman for Bund-Friends of the Earth Germany, said it is unlikely the modified fish would make it across the Atlantic for sale as many Europeans are very skeptical of genetically modified foods.

AquaBounty CEO Stotish countered his product has come under more scrutiny than most food.

"This is perhaps the most studied fish in history," he said. "Environmentally this is a very sustainable technology."

The company has several safeguards in place to quell concerns. The fish would be bred female and sterile, though a small percentage might be able to breed. They would be bred in confined pools where the potential for escape would be low.

In its environmental analysis of the fish released earlier this month, the FDA agreed with the company that there are enough safeguards in place.

Stotish says the fish would be bred in better conditions than many of the world's farmed salmon and could be located closer to towns and cities to help feed more people. The company has also said the increase in engineered salmon production could help relieve endangered wild salmon populations.

The company is also arguing that the fish do not need to be labeled as genetically engineered. Stotish said, "The label could even be misleading because it implies a difference that doesn't exist."

Associated Press writer David Rising in Berlin contributed to this report.

AgBioForum, 6(4): 155-161. ©2003 AgBioForum.

Labeling Genetically Engineered Food: The Consumer's Right to Know?

Carolyn Raab and Deana Grobe
Oregon State University

A statewide survey assessed Oregon voters' reasons for supporting or opposing a November 2002 ballot measure requiring labeling of genetically engineered (GE) foods. Of the 499 who voted on the measure, 34% supported labeling and 55% opposed it. Women, urban dwellers, and households with environmental organization membership tended to favor labeling. Reasons behind voting decisions varied widely. Consumers' right to know was a major reason for support. Cost was a major concern of the opposition. A higher percentage of those who favored labeling was "not at all likely" or "not too likely" to purchase GE-labeled food.

Key words: consumer attitudes, food, genetically engineered, genetically modified, labeling, likelihood to buy, Oregon ballot measure, organic.

Do consumers have the right to know whether the food they are buying has been genetically modified? Traditional crossbreeding has created genetically modified crops for many years. Genetic engineering now makes it possible to modify individual genes more precisely in order to grow crops with desired characteristics (Institute of Food Technologists, 2000). These genetically engineered (GE) foods began to appear in the marketplace in the mid-1990s—unbeknownst to most consumers.

Proponents of genetic modification in agriculture claim that it is a safe, valuable tool for efficiently producing more food (Jaeger, 2002). Critics claim that the safety of genetically modified foods for human health and the environment is unproven. These issues have led to questions about consumers' right to know what is in their food and how best to make this information available to them.

Labeling of biotech foods in the United States has been controversial (Korwek, 2000). Such labeling is required in the European Union and several other countries (Carter & Gruère, 2003; Jaeger, 2002; McCullum, 2000). The US Food and Drug Administration (FDA) does not require such labeling unless genetically modified products differ significantly from their traditional counterparts. Proposed FDA guidelines for voluntary labeling have not yet been finalized (Tegene, Huffman, Rousu, & Shogren, 2003). Some have suggested that voluntary labeling could increase industry credibility and consumer acceptance (Brown & Ping, 2003).

GE Labeling Issues in Oregon

Surveys have shown that consumers want genetically engineered food to be labeled (Brown & Ping, 2003; Hoban & Kendall, 1993; Nestle, 1998). Consumers' desires to make informed decisions about food purchases have made the biotechnology food labeling issue an important public policy concern. Labeling genetically modified food presents major challenges for policymakers, however (Carter & Gruère, 2003). The state of Oregon has been in the forefront of this debate.

In November 2002, Oregonians voted on a ballot measure that would have required labeling of genetically engineered foods sold or distributed in or from Oregon (State of Oregon, 2002). Ballot Measure 27 required labels on all foods containing at least 0.1% of genetically modified ingredients. Any foods grown or distributed in Oregon for human or animal consumption were affected. The measure defined *genetically engineered* as "grown, manufactured, processed or otherwise produced or altered with techniques that change the molecular or cell biology of an organism by means or in a manner not possible under natural conditions or processes, including but not limited to recombinant DNA techniques, cell fusion, micro-and macro-encapsulation, gene deletion and doubling, introducing a foreign gene, and changing the positions of genes." Furthermore, the measure's definition of genetic engineering excluded "breeding, conjugation, fermentation, hybridization, in-vitro fertilization and tissue culture processes" (State of Oregon, 2002).

Proponents of the ballot measure (Citizens for Safe Food) argued for the consumers' right to know. They questioned whether safety to human health and the environment had been proven. Opponents (Coalition against Costly Labeling Law) raised concerns about potential costs (including the impact on farmers), as reflected in the media campaign.

From: Kristine Niles [krniles@alaska.edu]
Sent: Wednesday, February 09, 2011 4:08 PM
To: Rep. Scott Kawasaki
Subject: thank you for taking on the farmed salmon propositions

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: GM Fish Bill

Scott,
I thank you for introducing bills that will protect our wild salmon from the potential ravages of farming and hybridizing salmon. It has happened time and again that by farming salmon- inevitably some escape and decimate the local populations of salmon because they are usually much more aggressive hybrid salmon species or they introduce pathogens that in turn decimate the local salmon populations through infection, and yet companies continue to farm salmon.

Dipnetting at Chitna is my family's main source of meat throughout the year. It is a healthy source of omega-3's and they have such low mercury levels that I can eat them throughout my pregnancy. It is vital to my family that the salmon remain strong and healthy!

I also support your efforts to ensure that all genetically modified salmon along with farmed salmon are required to be labeled as such. I, for one, will always purchase wild salmon over farmed or genetically modified.

Thank you for fighting to maintain out wild Alaskan salmon populations,
Kristine Niles

--
Kristine Niles, B.S.
Nutrition Research Technician
Center for Alaska Native Health Research
University of Alaska Fairbanks
(907)474-5486

Dist 8
GOLDSTREAM
#2

From: sltack63@hotmail.com
Sent: Thursday, January 13, 2011 2:49 PM
To: Rep. Scott Kawasaki
Subject: Please Introduce Bill to Label GMO Foods

Categories: GM Fish Bill

Stephen Tack
304 Noyes St.
Fairbanks, AK 99701-3045

HB - 9

PRESENT #1

January 13, 2011

The Honorable Scott Kawasaki
Alaska House of Representatives
State Capitol
Juneau, AK 99801-1182

Dear Representative Kawasaki:

Like most consumers, I want to avoid foods that contain genetically modified organisms, but they are not labeled.

In fact, the federal government does nothing to regulate, or guarantee the safety of, agricultural crops -- and now food animals -- that have been altered with foreign genes. There has never been a longitudinal scientifically rigorous health study on the impacts of eating genetically altered foods.

The little science there is shows that GMOs are more likely to trigger novel allergies, are less nutritious, sprayed with more herbicides, and contain elevated levels of hormones that correlate with common cancers.
And, there's no doubt that the most common GMO foods are linked to epidemic levels of obesity and diet-related diseases. These include artery-clogging meat and milk products from animals fed GMO grains, trans fats from GMO vegetable oils, and high fructose (GMO) corn syrup.

Public health depends on labeling GMO foods so consumers can avoid them.
Mandatory GMO labels are popular with consumers, consistently earning polling numbers politicians dream of.

I am hoping that you and your colleagues in the state legislature can help. Please stand up for consumers' right to know and truth in labeling by introducing a bill to label GMO foods this year.

I look forward to hearing from you on this important topic.

Sincerely,

Stephen Tack

From: nis@mosquitonet.com
Sent: Wednesday, February 09, 2011 7:42 PM
To: Rep. Scott Kawasaki
Subject: GE Salmon

Categories: GM Fish Bill

Scott, Sen Begich has introduced S 230 to ban genetically engineered salmon so if this becomes federal law it should solve the problem. But i agree that any genetically engineered food if approved, should be conspicuously labeled as such so the public can make the decision to buy or not to buy the product. If the feds won't establish this requirement, the state should for sale of such products in AK.

Thanks for your service.

Herbert R.Melchior
nis@mosquitonet.com

Dist 8

Groceries #2

From: bobsal@gci.net
Sent: Wednesday, February 02, 2011 12:45 PM
To: Rep. Scott Kawasaki
Subject: GMOs and Frankenfish

Categories: GM Fish Bill

Dear Mr. Kawasaki,
This is in response to your note to me about my letter to the editor on GMOs.
Here are two great sites regarding GMOs, both involving Jeffrey Smith, an expert on the subject.
The discussion mainly revolves around the big chemical companies and seed involvement.
The results from seed modification is disastrous and there is no reason to believe messing around with the genetics of fish will have a different outcome.
The greed by both the chemical companies and our federal involvement has the potential for great harm to the world's people, not just American's.

On a different note from GMOs is the USDA Food Guidelines for the American Diet. Government involvement thirty to fifty years ago has lead to the increased health problems of cancer, diabetes, obesity and mental health problems. They still cannot see the forest for the trees, as to the problem, blaming the people, instead of the high carbohydrate and low-fat recommendations. This problem should be investigated by legislators as it would go a long way to solving the high expense of healthcare.

I'm thankful for the interest by a legislator. Sincerely, Sally Stuart

http://www.responsibletechnology.org
The Institute for Responsible Technology (IRT)
The Institute for Responsible Technology is a world leader in educating policy makers and the public about genetically modified (GM) foods and crops. We investigate and report their risks and impact on health, environment, the economy, and agriculture, as well as the problems associated with current research, regulation, corporate practices, and reporting.

http://www.seedsofdeception.com/Public/Home/index.cfm
International bestselling author Jeffrey M. Smith is the leading spok
Genetically Modified Organisms (GMOs). He documents how the w
bluff and mislead critics, and put the health of society at risk. At thi
watch.

There are a myriad links to good sites regarding how wrong the USI
get your interest.
http://www.hulu.com/watch/196879/fat-head this movie explain
wrong the current recommendations are by the USDA.
Many bloggers have a scientific background and are up to date on t
seem to be indoctrinated in the low carb theory from medical scho
http://www.fathead-movie.com/index.php/2011/02/01/fat-kids-ar
Eighton
http://www.westonaprice.org/ Sally Fallon

Dist. 11

North Pole

print

Banning GMOs

by Sally Stuart, North Pole
01.11.11 - 12:13 am
Letter to the Editor

Hoop For Food

Jan. 7, 2011

To the editor:

How do we stop the genetic engineering of our food supply? First, the public has to be made aware of the dangers of genetically modified organisms.

The FDA has left it up to Monsanto to do its own safety testing and accepts the results. The vast majority of Americans would not buy GMOs if they were labeled as such. Economics would eliminate the problem. Who knows what the future holds for people eating GMOs?

Evidence is strong that GMOs for animals are catastrophic.

The seeds involved are soybeans, corn, canola, cottonseed and sugar beets. These foods are in everything, especially processed foods. Our dairy, poultry and meat animals are affected, as they are fed these grains.

Monsanto, Syngenta, Bayer, Dow and DuPont have bought more than 200 other seed companies, allowing them to dominate access to seeds.

Monsanto's motto is "No Food Shall Be Grown That We Don't Own."

The takeover has made it difficult for farmers to find natural seeds. In 1999, with the help of Arthur Anderson (Enron fame), Monsanto designed a plan to have the world use 100 percent of all commercial seeds genetically modified and patented by them in 15-20 years.

They developed strategies and tactics to achieve this aim. They want dominance in a world in which natural seeds would become extinct.

Monsanto has been ruthless. Following are two sites to follow up on and learn about this subject: www.seedsofdeception.com and www.responsibletechnology.org.

Scientists have been threatened, blackballed and fired. Government agencies have been infiltrated, and they have seized control. This has happened around the world.

However, the European Union, Australia and a few more countries have banned GMOs.

There are 65 health risks from GMOs. We need to insist the biochemistry take each of those risks and prove each is not harmful with independent

data.

Think over the last 20 years about changes happening to people in greater numbers: infertility, food allergies, autism, autoimmune diseases. Now "frankenfish" is in the news, another attempt to mess with our food.

People need to be informed of the truth about our food supply. The FDA has been grossly negligent.

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AlterNet

By Food and Water Watch
Posted on January 26, 2011, Printed on February 13, 2012
http://www.alternet.org/newsandviews/449939/obama%5C%27s_salmon_joke_gone_wrong%3A_fda_may_approve_genetically_engineered_frankenfish

By now, you've probably heard Obama's salmon joke. The one that induced laughter in an otherwise largely divided Congress during his State of the Union last night. Calling out the often complicated, bureaucratic nature of government regulation, Obama said: "The Interior Department is in charge of salmon while they're in fresh water, but the Commerce Department handles them when they're in saltwater. And I hear it gets even more complicated once they're smoked."

If it gets that complicated when they're smoked, how complicated is it when they're genetically engineered? As it turns out, it's pretty complicated and risky.

The FDA might approve genetically engineered (GE) salmon as the first GE animal for human consumption any day now. But what has this largely secretive approval process entailed? And why are over 90 percent of consumers saying they wouldn't eat GE meat, while government officials at agencies like the U.S. Fish & Wildlife Services warn of environmental disaster, stating "Maybe they [the FDA] should watch Jurassic Park"?

The FDA lacks an up-to-date method for assessing GE salmon's impact on consumer health. They've analyzed the fish as a "veterinary drug", not a food product. Three of the four studies the agency based its review on were non-peer-reviewed and conducted by AquaBounty, the very company that would benefit from producing the fish.

Furthermore, The FDA has failed to address critical issues surrounding the potential for escaped, genetically engineered salmon to impact wild salmon populations. The agency should conduct an environmental impact statement, required by law under the National Environmental Policy Act, for any regulatory action that could negatively affect the human environment. To make matters worse, the FDA, which has completed its faulty approval process, could decide tomorrow to put GE salmon on the market without even requiring labeling.

Over the last decade, the biotechnology industry has spent over half a billion pushing controversial products like GE food. Political Action Committee (PAC) contributions and lobbying expenditures by biotechnology interests more than doubled during this time. So President Obama, while your joke was admittedly funny, it's also all too true. Instead of making jokes, your administration needs to intervene before yet another convoluted "regulatory structure" is added to our already overburdened food system and these largely untested GE fish are unleashed on an unsuspecting public, paving the way for other poorly regulated GE animals (pigs and cows are already in the works).

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FOR IMMEDIATE RELEASE **No. 10-168**

Governor Urges Food and Drug Administration to Deny Application to Market Genetically Engineered Salmon

September 25, 2010, Anchorage, Alaska – Governor Sean Parnell expressed opposition to the approval of genetically engineered Atlantic salmon for human consumption. The governor said genetically engineered salmon pose significant potential threats to the environment, consumer health, and the wild seafood industry.

In a letter to the federal Food and Drug Administration (FDA) commissioner, the governor questioned whether the application has received sufficient scientific and public scrutiny, and said he was troubled by the lack of transparency in the review process.

"Like many, we are concerned genetically engineered salmon could jeopardize the health of wild salmon stocks if released into the wild," Governor Parnell said. "Genetically engineered salmon could spread disease, cross-breed with wild salmon, and out-compete them for food and mates."

The governor's letter reminded FDA that the U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration, and the National Academy of Sciences have recognized these concerns and warned the FDA about the potential dangers associated with escaped genetically engineered fish.

The governor urged the FDA to comply with federal law requiring consultation with the National Marine Fisheries Service and production of a report on environmental risks and impacts on wild stocks and called for rigorous scientific research into the long-term effects of consuming genetically engineered seafood prior to approving such products for sale.

"Alaska's salmon industry is critically important to the state's economy, and a primary source of employment, revenue, and food for Alaskans," Governor Parnell said. "Putting a product like this on the shelf only serves to undermine our efforts to educate consumers about the health benefits of salmon consumption. At the very minimum, FDA must ensure genetically engineered salmon are labeled as such, giving consumers a choice."

A copy of Governor Parnell's letter to Commissioner Margaret Hamburg is available at:
http://gov.alaska.gov/parnell_media/documents/9232010_%20CommissionerHamburgSalmon.pdf

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Petition: Classify GE salmon as 'food additive'

Three consumer groups are petitioning the FDA to treat genetically engineered salmon as a food additive so it's evaluated with more rigor.

Food & Water Watch, Consumers Union and the Center for Food Safety on Tuesday submitted a petition asking the U.S. Food and Drug Administration (FDA) to classify and evaluate AquaBounty Technologies' genetically engineered (GE) salmon and as a food additive.

Currently, the FDA classifies AquAdvantage Salmon as a new animal drug. The three consumer groups claim that the process used to create the GE salmon "substantially" alters its composition, including its nutrition value, so the fish should be treated as a food additive so it's evaluated with more rigor.

"FDA's choice to allow the first proposed transgenic animal for food to somehow only be review as a drug is contrary to law, science and common sense," said George Kimbrell, senior attorney for the Center for Food Safety. "Public health and transparency should be championed, not skirted, particularly when contemplating such an unprecedented approval."

"If FDA actually evaluated GE salmon as a food additive, including allergy-causing potential, they would not likely be able to approve it because of the health risks that have can already be seen in an incomplete set of data," added Dr. Michael Hansen, senior scientist with Consumers Union, the advocacy arm of Consumer Reports.

Food & Water Watch Executive Director Wenonah Hauter linked GE salmon to cancer. "GE salmon may contain increased levels of IGF-1, a hormone that helps accelerate the growth of the transgenic fish and is linked to breast, colon, prostate and lung cancer," she said.

In September 2010, FDA scientists preliminary determined that AquAdvantage Salmon is safe for human consumption, but an FDA advisory committee subsequently determined that more research is needed. It's been about 16 years since AquaBounty submitted its first GE fish study to the FDA.

Last week, AquaBounty announced that it is restructuring to reduce its operating costs by approximately 30 percent and increase its cash flow, in light of the continuing uncertainty surrounding the timing of U.S. Food and Drug Administration approval.

And in December, Dr. Ronald Stotish, president and CEO of AquaBounty, defended AquAdvantage Salmon — which allow Atlantic salmon to grow to market size of about 8 pounds in just 18 months, compared to the usual 36 months — during a congressional hearing addressing the environmental risks associated with GE fish. Several West Coast legislators, including U.S. Sen. Mark Begich of Alaska, are opposed GE salmon and have introduced legislation to block its approval.

Story from SeafoodSource.com:
http://www.seafoodsource.com/newsarticledetail.aspx?id=14093

Published: Tuesday, February 07, 2012

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17.20.040

(b) In this section,

(1) "farmed halibut, salmon, or sablefish product" means a food product that contains halibut, salmon, or sablefish that is propagated, farmed, or cultivated in a facility that grows, farms, or cultivates finfish in captivity or under positive control but that is not a salmon hatchery that is owned by the state or that holds a salmon hatchery permit under AS 16.10.400; in this paragraph, "positive control" has the meaning given in AS 16.40.199;

(2) "genetically modified fish" means

(A) a finfish or shellfish whose genetic structure has been altered at the molecular level by means that are not possible under natural conditions or processes, including recombinant DNA and RNA techniques, cell fusion, gene deletion or doubling, introduction of exogenous genetic material, alteration of the position of a gene, or similar procedure;

(B) the progeny of a finfish or shellfish described in (A) of this paragraph;

(3) "genetically modified fish product" means a product prepared from a genetically modified fish. (§ 11 ch 129 SLA 1949; am § 1 ch 164 SLA 1990; am §§ 1, 2 ch 8 SLA 2002; am § 1 ch 146 SLA 2004; am § 1 ch 26 SLA 2005)

Effect of amendments. — The 2005 amendment, effective August 17, 2005, added paragraph (a)(14); and in subsection (b) added paragraphs (2) and (3) and the paragraph (1) designation and, in paragraph (1), substituted "this paragraph" for "this subsection."

Collateral references. — Validity and construction of regulations dealing with misrepresentation in the sale of kosher food. 52 ALR3d 959.

Pre-emption of state food labeling legislation or regulation. 79 ALR Fed. 181.

Validity, under Commerce Clause (Article I, Section 8, Clause 3), of state statutes regulating labeling of food. 79 ALR Fed. 246.

Sec. 17.20.044. Sale and labeling of frozen meat, fish, and poultry. (a) Meat, fish, or poultry that has been frozen may not be sold, represented, or advertised as a fresh food.

(b) Meat, fish, and poultry that has been frozen must be labeled as a frozen food in accordance with regulations adopted by the commissioner.

(c) The commissioner shall adopt regulations that

(1) require frozen food labels for meat, fish, and poultry that has been frozen; and

(2) provide for the examination and inspection of meat, fish, and poultry to ascertain whether it has been frozen. (§ 11 ch 72 SLA 1998)

Sec. 17.20.045. Misbranding halibut. No person may label or offer for sale any food fish product designated as halibut, with or without additional descriptive words, unless the food fish product is Hippoglossus or Hippoglossus Stenolepsis. A person who violates this section is guilty of misbranding food under provisions of this chapter. (§ 1 ch 59 SLA 1968)

Sec. 17.20.048. Labeling and advertisement of halibut, salmon, and sablefish products. (a) A person who sells halibut, salmon, or sablefish products at wholesale or retail in this state may label or advertise the product as being or containing a "wild" halibut, salmon, or sablefish product, an "antibiotic-free" halibut, salmon, or sablefish product, or a "hormone-free" halibut, salmon, or sablefish product, and may indicate that the product or the halibut, salmon, or sablefish in the product is free from added colors and additives, if the product or the halibut, salmon, or sablefish in the product

(1) is harvested from a river or an ocean;

(2) has not been raised in captivity under control for its entire life; and

(3) is free from added colors and additives.

(b) The labeling or advertising allowed for a halibut, salmon, or sablefish product by (a) of this section may appear on the principal display panel of a packaged product, may be

'OUSE COMMITTEE REPOR

(7)
Date Referred to Committee: January 18, 2011 **FURTHER REFERRALS: Resources**

Date of Committee Action: 2/23/12

The HOUSE SPECIAL COMMITTEE ON FISHERIES considered: **HB 100**

HOUSE BILL NO. 100
"An Act prohibiting growing or cultivating genetically modified fish in the state."
HB 100 BAN CULTIVATION OF GENETICALLY MOD. FISH

Recommends it be replaced with [ ] HCS *or* [✓] CS *for* HB100 (FSH)
For Senate Bills with new title: [ ] Technical Title [ ] New Title: HCR _____ [✓] Same Title [ ] New Title

[ ] attach amendments
[ ] add new referral to _____Committee
[ ] Letter of Intent_____Committee

List of Abbrev for Depts.:
ADM
CED
COR
CRT
EED
DEC
DFG
GOV
DHS
LWF
LAW
LEG
MVA
DNR
DPS
REV
DOT
UA

***NEW* FISCAL NOTES**
*FN# is assigned by Chief Clerk's Office

*FN#	List by Dept(s):	Fiscal	Indet.	Zero
1	ADFG			✓

***PREVIOUS* FISCAL NOTES**

FN#	List by Dept(s):	Fiscal	Indet.	Zero

Signing with recommendations	Printed Last Name	DP	DNP	NR	AM
	Pruitt			X	
		X			
	HERRON	X			
	AUSTERMAN	X			
Robert J. Miller	MILLER	X			
Chair: Peter M Thompson	THOMPSON	X			
Chair:					

HB 121

<TARGET><BILL>HB 121</BILL><SUBJECT>HB 121</SUBJECT><COMM>HFSH27</COMM></TARGET>

27-GH1728\I
Kane
2/16/11

CS FOR HOUSE BILL NO. 121(FSH)

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-SEVENTH LEGISLATURE - FIRST SESSION

BY THE HOUSE SPECIAL COMMITTEE ON FISHERIES

Offered:
Referred:

Sponsor(s): HOUSE RULES COMMITTEE BY REQUEST OF THE GOVERNOR

A BILL

FOR AN ACT ENTITLED

"An Act relating to loans made to commercial fishermen under the Commercial Fishing Loan Act for product quality improvements and energy efficiency upgrades; establishing the commercial charter fisheries revolving loan fund, the mariculture revolving loan fund, and the Alaska microloan revolving loan fund and relating to those funds and loans from those funds; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* **Section 1.** AS 16.10.320 is amended by adding a new subsection to read:

(*l*) For a new loan under AS 16.10.300 - 16.10.370, made on or after the effective date of this Act, the department may provide a reduction of the interest rate of not more than two percent if at least 50 percent of the loan proceeds are used by the borrower for product quality improvements or energy efficiency upgrades if the improvements or upgrades use products manufactured or produced in the state. When the department offers a reduction under this subsection, the department shall provide

the reduction to all loan applicants who meet the criterion described in this subsection. In this subsection, "manufactured or produced" means processing, developing, or making an item into a new item with a distinct character and use.

*** Sec. 2.** AS 16.10 is amended by adding new sections to read:

Article 13. Commercial Charter Fisheries Revolving Loan Fund.

Sec. 16.10.801. Commercial charter fisheries revolving loan fund. (a) The commercial charter fisheries revolving loan fund is created in the Department of Commerce, Community, and Economic Development to carry out the purposes of AS 16.10.801 - 16.10.890.

(b) The commercial charter fisheries revolving loan fund consists of the following:

(1) money appropriated to, transferred to, or received by gift, grant, devise, bequest, or donation to the fund;

(2) principal and interest payments or other income earned on loans or investments of the fund;

(3) money chargeable to principal or interest that is collected through liquidation by foreclosure or other process on loans made under AS 16.10.801 - 16.10.890.

(c) Money in the fund may be used by the legislature to make appropriations for costs of administering AS 16.10.801 - 16.10.890.

Sec. 16.10.805. Powers and duties of the department. The department may

(1) make loans to eligible applicants under AS 16.10.801 - 16.10.890

(A) for the purchase of charter halibut permits;

(B) for the purchase or construction of a charter halibut fishing vessel;

(C) to upgrade existing charter halibut fishing vessels and gear for the purpose of improving engine fuel efficiency;

(D) to refinance debt obligations made by other lenders more than 12 months before the department received the loan application and incurred by an applicant for the purchase of charter halibut fishing vessels or gear if the applicant otherwise qualifies for a loan under AS 16.10.801 -

16.10.890; the department may collect a refinancing loan origination charge as provided by regulation;

(2) receive, take, hold, and administer any appropriation, transfer, gift, grant, bequest, devise, or donation of money for the fund;

(3) establish amortization plans for repayment of loans, including extensions of the terms of loans;

(4) allow an assumption of a loan if

(A) the applicant meets the requirements established under this section; and

(B) approval of the assumption would be consistent with the purposes of AS 16.10.801 - 16.10.890;

(5) establish the rate of interest for loans consistent with law;

(6) charge and collect fees for services provided under AS 16.10.801 - 16.10.890;

(7) adopt regulations under AS 44.62 necessary to carry out the provisions of AS 16.10.801 - 16.10.890, including regulations to establish reasonable fees for services provided; and

(8) designate agents and delegate powers as necessary to the agents.

Sec. 16.10.810. Eligibility. (a) For an applicant to be eligible for a loan under AS 16.10.801 - 16.10.890, the applicant shall be a resident of the state, as determined under (c) of this section, and shall

(1) qualify for the purchase of a charter halibut permit under applicable law;

(2) qualify as a transferee for a charter halibut permit under applicable law;

(3) purchase or construct a charter halibut fishing vessel; or

(4) upgrade an existing charter halibut fishing vessel or gear for the purpose of improving engine fuel efficiency.

(b) In addition to the requirements set out in (a) of this section, the applicant

(1) may not be eligible for financing from other recognized commercial lending institutions; or

(2) shall be able to obtain only a portion of the total loan request from a recognized commercial lending institution.

(c) To meet the residency requirements of (a) of this section, the applicant

(1) shall physically reside in this state and maintain a domicile in this state during the 24 consecutive months preceding the date of application for the program; and

(2) may not have

(A) declared or established residency in another state; or

(B) received residency or a benefit based on residency from another state.

Sec. 16.10.815. Limitations on loans. (a) Except as provided in (b) of this section, a loan under AS 16.10.801 - 16.10.890

(1) may not exceed $100,000 a year;

(2) may not exceed a term of 15 years, except for extensions under AS 16.10.805;

(3) may not bear interest at a rate greater than the prime rate, as defined in AS 44.88.599, plus two percentage points, but which may not be less than three percent per year and not more than 10 1/2 percent a year;

(4) must be secured by a first priority lien on collateral acceptable to the commissioner; and

(5) may not be made to a person who has a past due child support obligation established by court order or by the child support services agency under AS 25.27.160 - 25.27.220 at the time of application.

(b) The interest rate for loans for the improvement of engine fuel efficiency must be two percentage points below the prime rate, as defined in AS 44.88.599, but may not be less than three percent a year and not more than 10 1/2 percent a year.

(c) The total balances outstanding on loans made to a borrower under AS 16.10.805 may not exceed $300,000.

(d) After the initial interest rate is set under (a) or (b) of this section for a loan made under AS 16.10.801 - 16.10.890, the department may provide a reduction of the interest rate of not more than two percent if at least 50 percent of the loan proceeds are

used by the borrower for engine fuel efficiency improvements if the upgrades use products manufactured or produced in the state. When the department offers a reduction under this subsection, the department shall provide the reduction to all loan applicants who meet the criterion described in this subsection. In this subsection, "manufactured or produced" means processing, developing, or making an item into a new item with a distinct character and use.

Sec. 16.10.820. Default. If the borrower defaults on a note, the department shall notify the borrower of the default and the consequences of default by mailing a notice to the borrower's most recent address provided to the department by the borrower or obtained by the department.

Sec. 16.10.825. Special account established. (a) The foreclosure expense account is established as a special account within the commercial charter fisheries revolving loan fund.

(b) The department may expend money credited to the foreclosure expense account when necessary to protect the state's security interest in collateral on loans granted under AS 16.10.815 or to defray expenses incurred during foreclosure proceedings after an obligor defaults.

Sec. 16.10.830. Disposal of property acquired after default. The department shall dispose of property acquired through default of a loan made under AS 16.10.801 - 16.10.890. Disposal must be made in a manner that serves the best interest of the state and may include the amortization of payments over a period of years.

Sec. 16.10.835. Waiver of confidentiality. The commissioner may release information about the borrower's loan to any individual if release of the information has been authorized by the borrower.

Sec. 16.10.890. Definitions. In AS 16.10.801 - 16.10.890,

(1) "commissioner" means the commissioner of commerce, community, and economic development;

(2) "department" means the Department of Commerce, Community, and Economic Development.

Article 14. Mariculture Revolving Loan Fund.

Sec. 16.10.900. Mariculture revolving loan fund. (a) The mariculture

revolving loan fund is created within the Department of Commerce, Community, and Economic Development to carry out the purposes of AS 16.10.900 - 16.10.945.

(b) The mariculture revolving loan fund consists of the following:

(1) money appropriated to, transferred to, or received by gift, grant, devise, bequest, or donation to the fund;

(2) principal and interest payments or other income earned on loans or investments of the fund; and

(3) money chargeable to principal or interest that is collected through liquidation by foreclosure or other process on loans made under AS 16.10.900 - 16.10.945.

(c) Money in the fund may be used by the legislature to make appropriations for costs of administering AS 16.10.900 - 16.10.945.

Sec. 16.10.905. Powers and duties of the department. The department may

(1) make loans to eligible applicants under AS 16.10.900 - 16.10.945 for the planning, construction, and operation of a mariculture business;

(2) receive, take, hold, and administer any appropriation, transfer, gift, grant, bequest, devise, or donation of money for the fund;

(3) establish amortization plans for repayment of loans, including extensions of the terms of loans;

(4) allow an assumption of a loan if

(A) the applicant meets the requirements established under this section; and

(B) approval of the assumption would be consistent with the purposes of AS 16.10.900 - 16.10.945;

(5) establish the rate of interest for loans consistent with law;

(6) charge and collect fees for services provided under AS 16.10.900 - 16.10.945;

(7) adopt regulations under AS 44.62 necessary to carry out the provisions of AS 16.10.900 - 16.10.945, including regulations to establish reasonable fees for services provided; and

(8) designate agents and delegate powers as necessary to the agents.

Sec. 16.10.910. Eligibility. (a) For an applicant to be eligible for a loan under AS 16.10.900 - 16.10.945, the applicant shall

(1) be a resident of the state, as determined under (c) of this section;

(2) have a permitted mariculture farm location in this state; and

(3) have experience or training in the mariculture industry.

(b) In addition to the requirements set out in (a) of this section, the applicant

(1) may not be eligible for financing from other recognized commercial lending institutions; or

(2) shall be able to obtain only a portion of the total loan request from a recognized commercial lending institution.

(c) To meet the residency requirements of (a) of this section, the applicant

(1) shall physically reside in this state and maintain a domicile in this state during the 24 consecutive months preceding the date of application for the program; and

(2) may not have

(A) declared or established residency in another state; or

(B) received residency or a benefit based on residency from another state.

Sec. 16.10.915. Limitations on loans. (a) Except as provided in (b) and (c) of this section, a loan under AS 16.10.900 - 16.10.945

(1) may not exceed $100,000 a year;

(2) may not exceed a term of 20 years, except for extensions under AS 16.10.905;

(3) may not bear interest at a rate greater than the prime rate, as defined in AS 44.88.599, plus one percentage point, but which may not be less than five percent a year and not more than nine percent a year;

(4) must be secured by a first priority lien on collateral acceptable to the department; and

(5) may not be made to a person who has a past due child support obligation established by court order or by the child support services agency under AS 25.27.160 - 25.27.220 at the time of application.

(b) Subsequent loans may be made to the borrower under AS 16.10.910 if the total of the balances outstanding on the loans received by the borrower does not exceed $300,000.

(c) A loan under AS 16.10.910 may be made for the purchase of boats or vessels determined to be integral to the operation of the farm.

(d) For a loan made under AS 16.10.900 - 16.10.945, the department may provide a reduction of the interest rate of not more than two percent if at least 50 percent of the loan proceeds are used by the borrower for purchasing products manufactured or produced in the state. When the department offers a reduction under this subsection, the department shall provide the reduction to all loan applicants who meet the criterion described in this subsection. In this subsection, "manufactured or produced" means processing, developing, or making an item into a new item with a distinct character and use.

Sec. 16.10.920. Repayment of principal of and interest on loans. The department may not require the repayment of principal on a loan made under AS 16.10.910 during the first six years of the loan. Interest on the principal of a loan made under AS 16.10.910 does not accrue during the first six years of the loan.

Sec. 16.10.925. Default. If the borrower defaults on a note, the department shall notify the borrower of the default and the consequences of default by mailing a notice to the borrower's most recent address provided to the department by the borrower or obtained by the department.

Sec. 16.10.930. Special account established. (a) The foreclosure expense account is established as a special account in the mariculture revolving loan fund.

(b) The department may expend money credited to the foreclosure expense account when necessary to protect the state's security interest in collateral on loans granted under AS 16.10.910 or to defray expenses incurred during foreclosure proceedings after an obligor defaults.

Sec. 16.10.935. Disposal of property acquired after default. The department shall dispose of property acquired through default of a loan made under AS 16.10.900 - 16.10.945. Disposal must be made in a manner that serves the best interest of the state and may include the amortization of payments over a period of years.

Sec. 16.10.940. Waiver of confidentiality. The commissioner may release information about the borrower's loan to any individual if release of the information has been authorized by the borrower.

Sec. 16.10.945. Definitions. In AS 16.10.900 - 16.10.945,

(1) "commissioner" means the commissioner of commerce, community, and economic development;

(2) "department" means the Department of Commerce, Community, and Economic Development;

(3) "mariculture" means the farming of shellfish and aquatic plants as defined in AS 16.40.199.

* **Sec. 3.** AS 44.33 is amended by adding new sections to read:

Article 15. Alaska Microloan Revolving Loan Fund.

Sec. 44.33.950. Alaska microloan revolving loan fund. (a) The Alaska microloan revolving loan fund is created in the Department of Commerce, Community, and Economic Development to carry out the purposes of AS 44.33.950 - 44.33.990.

(b) The Alaska microloan revolving loan fund consists of the following:

(1) money appropriated to, transferred to, or received by gift, grant, devise, bequest, or donation to the fund;

(2) principal and interest payments or other income earned on loans or investments of the fund;

(3) money chargeable to principal or interest that is collected through liquidation by foreclosure or other process on loans made under AS 44.33.950 - 44.33.990.

(c) Money in the fund may be used by the legislature to make appropriations for costs of administering AS 44.33.950 - 44.33.990.

Sec. 44.33.955. Powers and duties of the department. The department may

(1) make loans to eligible applicants under AS 44.33.950 - 44.33.990 to be used for working capital, equipment, construction, or other commercial purposes by a business located in the state;

(2) receive, take, hold, and administer any appropriation, transfer, gift,

grant, bequest, devise, or donation of money for the fund;

(3) establish amortization plans for repayment of loans, including extensions of the terms of loans;

(4) allow an assumption of a loan if

(A) the applicant meets the requirements established under this section; and

(B) approval of the assumption would be consistent with the purposes of AS 44.33.950 - 44.33.990;

(5) establish the rate of interest for loans consistent with law;

(6) charge and collect fees for services provided under AS 44.33.950 - 44.33.990;

(7) adopt regulations under AS 44.62 necessary to carry out the provisions of AS 44.33.950 - 44.33.990, including regulations to establish reasonable fees for services provided; and

(8) designate agents and delegate powers as necessary to the agents.

Sec. 44.33.960. Eligibility. (a) For an applicant to be eligible for a loan under AS 44.33.950 - 44.33.990, the applicant shall

(1) be a resident of the state, as determined under (b) of this section;

(2) provide a reasonable amount of money from other nonstate sources for use on any project or enterprise for which money from a loan will be used; and

(3) if the requested loan amount is $35,000 or more, provide to the department a document from a state financial institution stating that

(A) the applicant has been denied a loan for the same purpose; or

(B) a loan from the financial institution is contingent on the applicant also receiving a loan from the fund.

(b) To meet the residency requirements of (a) of this section, the applicant

(1) shall physically reside in this state and maintain a domicile in this state during the 12 consecutive months preceding the date of application for the program; and

(2) may not have

(A) declared or established residency in another state; or

(B) received residency or a benefit based on residency from another state.

Sec. 44.33.965. Limitations on loans. (a) The department may use money from the Alaska microloan revolving loan fund to make loans of up to $35,000 to a person or loans of up to $70,000 to two or more persons.

(b) A loan under AS 44.33.950 - 44.33.990

(1) may not exceed a term of six years, except for extensions under AS 44.33.955;

(2) may not bear interest at a rate greater than the prime rate, as defined in AS 44.88.599, plus one percentage point but which may not be less than six percent a year and not more than eight percent a year;

(3) must be secured by collateral acceptable to the commissioner; and

(4) may not be made to a person who has a past due child support obligation established by court order or by the child support services agency under AS 25.27.160 - 25.27.220 at the time of application.

Sec. 44.33.970. Special account established. (a) The foreclosure expense account is established as a special account in the Alaska microloan revolving loan fund.

(b) The department may expend money credited to the foreclosure expense account when necessary to protect the state's security interest in collateral on loans granted under AS 44.33.960 or to defray expenses incurred during foreclosure proceedings after an obligor defaults.

Sec. 44.33.975. Default. If the borrower defaults on a note, the department shall notify the borrower of the default and the consequences of default by mailing a notice to the borrower's most recent address provided to the department by the borrower or obtained by the department.

Sec. 44.33.980. Disposal of property acquired after default. The department shall dispose of property acquired through default of a loan made under AS 44.33.950 - 44.33.990. Disposal must be made in a manner that serves the best interest of the state and may include the amortization of payments over a period of years.

Sec. 44.33.990. Definitions. In AS 44.33.950 - 44.33.990,

(1) "commissioner" means the commissioner of commerce, community, and economic development;

(2) "department" means the Department of Commerce, Community, and Economic Development.

*** Sec. 4.** This Act takes effect immediately under AS 01.10.070(c).

AMENDMENT

OFFERED IN THE HOUSE BY REPRESENTATIVE THOMPSON

TO: CSHB 121(FSH), Draft Version "I"

Page 8, line 15, following "principal":

Insert "and interest"

Page 8, line 17:

Delete "does not accrue during"

Insert "may be deferred for a period of not more than"

FISCAL NOTE

STATE OF ALASKA
2011 LEGISLATIVE SESSION

Fiscal Note Number
Bill Version
() Publish Date

Identifier (file name) HB059-CCED-DED-02-04-11
Title: Commerical Fishing Act
Sponsor: Representative Seaton
Requester: House Fisheries

Dept. Affected: DCCED
Appropriation: Economic Development
Allocation: Economic Development
OMB Component Number: 801

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information					
OPERATING EXPENDITURES	**FY 2012**	**FY 2012**	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**
Personal Services	0.0		0.0	0.0	0.0	0.0	0.0
Travel							
Services							
Commodities							
Capital Outlay							
Grants							
Miscellaneous (Fund Capitalization)							
TOTAL OPERATING	**0.0**		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
CAPITAL EXPENDITURES							
CHANGE IN REVENUES	**0.0**		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts							
1003 GF Match							
1004 GF							
1005 GF/Program Receipts							
1037 GF/Mental Health							
Alaska Small Business RLF Program	0.0		0.0	0.0	0.0	0.0	0.0
TOTAL	**0.0**		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Estimate of any current year (FY2011) cost

POSITIONS

Full-time	**0.0**		0	0	0	0	0
Part-time							
Temporary							

Why this fiscal note differs from previous version (if initial version, please note as such)

Prepared by: Cathy Jeans, Acting Operations Manager — Phone: 465-2728
Division: Economic Development — Date/Time: 2/5/11 6:00 PM
Approved by: Susan K. Bell, Commissioner — Date: 2/5/2011
Commerce, Community and Economic Development

(Revised 1/27/2011 OMB)

FISCAL NOTE

STATE OF ALASKA
2011 LEGISLATIVE SESSION

BILL NO. _____

Analysis

This legislation would amend the Commerical Fishing Revolving Loan Fund to allow the Department of Commerce, Community and Economic Development (DCCED) to provide an interest rate reduction to applicants obtaining loans for the purpose of energy efficiency upgrades or product quality improvments that are manufactured in Alaska.

DCCED does not anticipate a significant fiscal impact over the next six years as a result of this legislation.

FISCAL NOTE

STATE OF ALASKA
2011 LEGISLATIVE SESSION

Fiscal Note Number
Bill Version
() Publish Date

Identifier (file name) HB121-CCED-DED-02-03-11
Title Economic Development Loans
Sponsor Rules Committee
Requester House Fisheries

Dept. Affected Fund Transfer
Appropriation Op Sys DGF Transfers
Allocation Micro-Loan Fund (RLF)
OMB Component Number

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information					
OPERATING EXPENDITURES	**FY 2012**	**FY 2012**	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**
Personal Services							
Travel							
Services							
Commodities							
Capital Outlay							
Grants							
Miscellaneous							
TOTAL OPERATING	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
CAPITAL EXPENDITURES							
CHANGE IN REVENUES							

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts							
1003 GF Match							
1004 GF	3,500.0						
1005 GF/Program Receipts							
1037 GF/Mental Health							
Other (please identify)							
TOTAL	**3,500.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Estimate of any current year (FY2011) cost

POSITIONS

Full-time							
Part-time							
Temporary							

Why this fiscal note differs from previous version (if initial version, please note as such)

Prepared by Wanetta Ayers, Division Director
Division Economic Development
Approved by Susan K. Bell, Commissioner
Commerce, Community and Economic Development

Phone 269-4048
Date/Time 2/3/11 1:45 PM
Date 2/4/2011

(Revised 1/27/2011 OMB)

FISCAL NOTE

STATE OF ALASKA **BILL NO.** _____
2011 LEGISLATIVE SESSION

Analysis

Alaska Micro-loan Revolving Loan Fund - This loan program would provide short term, low interest loans to Alaska small businesses to be used for typical business purposes such as working capital, purchasing machinery, equipment and inventory and leasehold improvements. The initial capitalization would be $3.5 million.

FISCAL NOTE

STATE OF ALASKA
2011 LEGISLATIVE SESSION

Fiscal Note Number
Bill Version
() Publish Date

Identifier (file name) HB121-CCED-DED-02-03-11
Title: Economic Development Loans
Sponsor: Rules Committee
Requester: House Fisheries

Dept. Affected: Fund Transfer
Appropriation: Op Sys DGF Transfers
Allocation: Shellfish Mariculture (RLF)
OMB Component Number

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information					
OPERATING EXPENDITURES	**FY 2012**	**FY 2012**	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**
Personal Services							
Travel							
Services							
Commodities							
Capital Outlay							
Grants							
Miscellaneous							
TOTAL OPERATING	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
CAPITAL EXPENDITURES							
CHANGE IN REVENUES							

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts							
1003 GF Match							
1004 GF	3,000.0						
1005 GF/Program Receipts							
1037 GF/Mental Health							
Other (please identify)							
TOTAL	**3,000.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Estimate of any current year (FY2011) cost

POSITIONS

Full-time							
Part-time							
Temporary							

Why this fiscal note differs from previous version (if initial version, please note as such)

Prepared by: Wanetta Ayers, Division Director — Phone: 269-4048
Division: Economic Development — Date/Time: 2/8/11 8:30 AM
Approved by: Susan K. Bell, Commissioner — Date: 2/8/2011
Commerce, Community and Economic Development

(Revised 1/27/2011 OMB)

FISCAL NOTE

STATE OF ALASKA
2011 LEGISLATIVE SESSION

BILL NO. _____

Analysis

Shellfish Mariculture Revolving Loan Fund - This loan fund will assist shellfish mariculture businesses in purchasing equipment and seed necessary to develop and grow. Initial capitalization would be $3 million. There are no anticipated additional operating costs for this loan fund.

FISCAL NOTE

STATE OF ALASKA
2011 LEGISLATIVE SESSION

Fiscal Note Number
Bill Version
() Publish Date

Identifier (file name) HB121-CCED-DED-02-03-11
Title: Economic Development Loans
Sponsor: Rules Committee
Requester: House Fisheries

Dept. Affected: Fund Transfer
Appropriation: Op Sys DGF Transfers
Allocation: Com Charter Fisheries (RLF)
OMB Component Number

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information					
OPERATING EXPENDITURES	**FY 2012**	**FY 2012**	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**
Personal Services							
Travel							
Services							
Commodities							
Capital Outlay							
Grants							
Miscellaneous							
TOTAL OPERATING	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
CAPITAL EXPENDITURES							
CHANGE IN REVENUES							

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts							
1003 GF Match							
1004 GF	5,000.0						
1005 GF/Program Receipts							
1037 GF/Mental Health							
Other (please identify)							
TOTAL	**5,000.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Estimate of any current year (FY2011) cost

POSITIONS

Full-time							
Part-time							
Temporary							

Why this fiscal note differs from previous version (if initial version, please note as such)

Prepared by: Wanetta Ayers, Division Director — Phone: 269-4048
Division: Economic Development — Date/Time: 2/8/11 8:35 AM
Approved by: Susan K. Bell, Commissioner — Date: 2/8/2011
Commerce, Community and Economic Development

(Revised 1/27/2011 OMB)

FISCAL NOTE

STATE OF ALASKA **BILL NO.** _____
2011 LEGISLATIVE SESSION

Analysis

Commercial Charter Fisheries Revolving Loan Fund - Administered by the Division of Economic Development, this loan fund would be substantially similar to the Commercial Fishing Loan Fund. Initial capitalization would be $5 million.

FISCAL NOTE

STATE OF ALASKA
2011 LEGISLATIVE SESSION

Fiscal Note Number
Bill Version
() Publish Date

Identifier (file name) HB121-CCED-DED-02-03-11
Title: Economic Development Loans
Sponsor: Rules Committee
Requester: House Fisheries

Dept. Affected: DCCED
Appropriation: Economic Development
Allocation: Economic Development
OMB Component Number: 801

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information					
OPERATING EXPENDITURES	**FY 2012**	**FY 2012**	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**
Personal Services	124.8		124.8	124.8	124.8	124.8	124.8
Travel	10.0		10.0	10.0	10.0	10.0	10.0
Services	28.4		28.4	28.4	28.4	28.4	28.4
Commodities	1.0		1.0	1.0	1.0	1.0	1.0
Capital Outlay	4.8		0.5	0.5	0.5	0.5	0.5
Grants							
Miscellaneous							
TOTAL OPERATING	**169.0**	**0.0**	**164.7**	**164.7**	**164.7**	**164.7**	**164.7**
CAPITAL EXPENDITURES							
CHANGE IN REVENUES							

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts							
1003 GF Match							
1004 GF							
1178 Micro-Loan Fund (RLF) (New)	84.5						
1178 Com Charter Fisheries Fund RLF (I	84.5						
Other (please identify)							
TOTAL	**169.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Estimate of any current year (FY2011) cost

POSITIONS

Full-time	**2.0**		2	2	2	2	2
Part-time							
Temporary							

Why this fiscal note differs from previous version (if initial version, please note as such)

Prepared by: Wanetta Ayers, Division Director
Phone: 269-4048
Division: Economic Development
Date/Time: 2/8/11 8:30 AM
Approved by: Susan K. Bell, Commissioner
Date: 2/8/2011
Commerce, Community and Economic Development

(Revised 1/27/2011 OMB)

Analysis

Commercial Charter Fisheries Revolving Loan Fund - Operating expenses would be paid by the earnings of the fund, as is the case with other existing division loan funds. The cost projections that are provided include personal services for an Accounting Technician I position, with initial first year set-up expenses (supplies and equipment, a projected "per employee" annual contractual services cost with all of these costs projected through 2017. In addition to these expenses, existing division staff would conduct several outreach trips to promote the loan fund and prepare the necessary regulations.

Alaska Micro-loan Revolving Loan Fund - All operating expenses would be paid from earnings of the fund. Projected operating expenses are: personal services for one flexed Loan Closer I/II, with initial first year set-up expenses (supplies and equipment), a projected "per employee" annual contractual services cost, with all of these costs projected through 2017. In addition to these expenses, existing division staff would conduct several outreach trips to promote the loan fund and prepare the necessary regulations.

Treasures of the Tidelands

Shellfish Commerce

The Pacific Northwest has a bounty of natural riches that have long fueled economic trade and growth in the region. While Washington's economy boasts diversity, the value of the state's natural resource industries remain significant and indispensable. Their contribution to the base economy makes a compelling case for stewardship, innovation and sustainability to ensure broad and far-reaching returns from these natural assets for generations to come.

The commercial shellfish industry is one of these resource-based businesses that anchors the economies of many rural western Washington communities. The sale of products to buyers around the world brings in new money that provides employment and an enhanced tax base as revenues circulate and re-circulate through the communities. Recreational shellfish harvesting is structurally different from the commercial industry, yet generates comparable economic benefits.

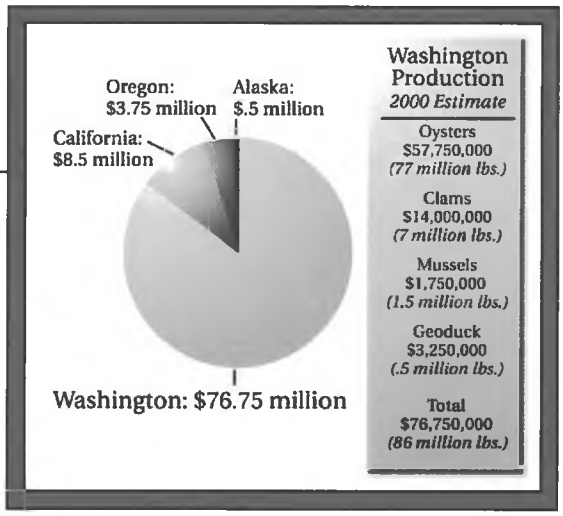
World-Class Foods

Washington is the leading producer of farmed bivalve shellfish in the United States, generating an estimated $77 million in sales and accounting for 86 percent of the West Coast's production in the year 2000.

Washington growers sell a variety of live and processed products that include Pacific, Kumamoto, Tasmanian, Eastern, European flat and Olympia oysters; Manila, littleneck, razor and geoduck clams; and blue and Mediterranean mussels. Pacific oysters, Manila clams and blue mussels are the leading commercial species in their respective categories. Puget Sound accounts for most of the clam and mussel sales while Willapa Bay leads in oyster sales.

The commercial harvest of geoduck is a unique story and an increasingly lucrative component of the state's molluscan shellfish industry. Starting with the discovery of enormous populations of geoduck in Puget Sound in the 1950s and the first commercial harvests in 1970, the portly clam has emerged as the Microsoft of the shellfish industry. Wholesale prices typically range between $5 and $10 per pound, and restaurant prices can run as high as $100 per pound in prime Asian markets. The total biomass of Puget

Commercial and recreational shellfish production is big business in the coastal areas of western Washington where the shorelines are still healthy enough to support productive harvests. For instance, the commercial shellfish industry is the second largest private-sector employer in both Mason and Pacific counties, supporting more than 1,200 jobs and an estimated total annual payroll that exceeds $27 million. Another example is the coastal razor clam fishery, which generates an estimated $7 million annually in commercial sales and injects an additional $12 million annually into local economies from the sport fishery. In short, shellfish harvesting provides a strong and steady employment base and possesses two highly coveted economic attributes—sustainability and potential for growth.



Pacific Coast Shellfish Growers Association

Estimated West Coast production of farmed oysters, clams, mussels and geoduck, 2000

Sound's geoduck population is estimated at 674 million pounds, of which approximately 163 million pounds is available for commercial harvest to depths of 70 feet. The estimated, harvestable biomass is significant because the annual harvest limit of 2.7 percent, set by the Washington State Department of Natural Resources, is pegged to this value. The harvest of wild geoduck is now complemented by significant investments and advances in intertidal geoduck aquaculture by Washington shellfish growers. One farming approach involves hand planting nursery seed in mesh-covered tubes to protect the ducks until they are mature enough to burrow more deeply into the sediments and avoid predators.

Fascinating Facts

- Washington is the leading producer of farmed bivalve shellfish in the U.S.
- The state's production of farmed oysters, mussels, clams and geoduck generates approximately $77 million in sales annually.
- Commercial shellfish production is the second largest private-sector employer in Pacific and Mason counties.
- Oakland Bay in Mason County yields more than three million pounds of clams annually.
- The annual value of the coastal razor clam fishery is estimated at $12 million recreationally and another $7 million commercially.
- Puget Sound's commercial geoduck fishery represents the most valuable clam fishery on the west coast of North America.
- The total biomass of Puget Sound's geoduck population is estimated at 674 million pounds, approximately a quarter of which is considered available for commercial harvest.

Economic Prospects

In purely economic terms, shellfish harvesting faces a rosy future in Washington. The state's coastal areas are attractive destinations for residents and tourists alike, highly prized for beachcombing, recreational harvesting and other activities that generate needed revenues for local communities. On the commercial front, with ongoing improvements in hatchery methods and other aquaculture techniques, the shellfish industry is poised for significant growth, ready to capitalize on swelling worldwide demand for high quality seafoods.

But things are not that simple. A number of factors influence shoreline uses. For shellfish harvesting, the most significant limiting factor is the condition of the shoreline environment and the availability of clean, unpolluted marine water.

Water quality can be affected by pollution from human activities and other sources as well as naturally occurring harmful algal blooms, mainly paralytic shellfish poison (PSP) and domoic acid (also known as amnesic shellfish poison or ASP). Harvest restrictions caused by these problems take away sales, jobs, recreational opportunities and harvest rights. Shellfish closures caused by harmful algal blooms need to run their course before shellfish can be harvested. In 1991, the closure of coastal crab and razor clam fisheries caused by high levels of domoic acid cost an estimated $15 to $20 million.

The economic and environmental harm caused by pollution, mainly fecal pollution, can be even more devastating and long lasting because of the difficulty in finding and fixing the potential pollution sources. Large stretches of the state's shorelines have been rendered unsuitable for shellfish harvesting because adjacent shorelines and watersheds have been developed with marinas, homes, roads, shopping centers and other urban land uses. Many of these areas cannot be recovered for shellfish harvesting, but some areas can be restored, and those that remain open and suitable for harvesting need to be preserved. In 1999, the Washington State Department of Natural Resources estimated that 22 percent of the state's surveyed geoduck biomass was unharvestable because of pollution.



Photo courtesy Taylor Shellfish Farms

Farmed geoduck beds in Samish Bay, Skagit County

The economic value of healthy shorelines isn't limited to growing and harvesting shellfish, but instead is defined by a broader set of measures that includes long-term property values and other financial and quality-of-life measures. People want to visit and live in places where shoreline waters are safe to use and the seafoods they nurture are safe to eat. Clean water for shellfish harvesting brings together the complementary interests of good business, strong communities and a healthy environment.

Sources

Olympic Region Harmful Algal Blooms (ORHAB) Partnership, undated, ORHAB newsletter. Washington Department of Natural Resources, 2000, *Puget Sound Commercial Geoduck Fishery Management Plan* and 2002, *The Geoduck Program: Managing a Valuable Natural Resource for all Washington Citizens*. People for Puget Sound, 1996, *Shellfish and the Sound Economy*. Economic Development Council of Mason County, 2002, *Mason County Shellfish Industry Update*. Pacific Coast Shellfish Growers Association website at www.pcsga.org. R. Horner, 1998, *Harmful Algal Blooms in Puget Sound: General Perspective*.

PUGET SOUND ACTION TEAM
www.psat.wa.gov
If you would like copies of this document in an alternative format, please call (800) 54-SOUND or for TDD, call (800) 833-6388.

PACIFIC COAST SHELLFISH GROWERS ASSOCIATION
SHELLFISH PRODUCTION ON THE WEST COAST

		Oysters	Clams	Mussels	Geoduck	All Shellfish Larvae and Seed	Total
		Current*	Current*	Current*	Current*		Current
Washington	*Pounds*	61,000,000	9,520,000	2,750,000	1,650,000		**74,920,000**
	Sales	*$ 57,750,000*	$19,550,000	$3,162,500	$20,100,00	$7,000,000	**107,562,500**
California	*Pounds*	9,270,995	741,463	315,000			**10,327,458**
	Sales	*$ 12,361,326*	$830,000	$945,000		$2,300,000	**16,436,326**
Oregon	*Pounds*	2,379,988					**2,379,988**
	Sales	*$ 2,253,135*				$750,000	**3,003,135**
Alaska	*Pounds*	206,709	7,839	1,988			**216,536**
	Sales	*$ 441,781*	$24,841	*$6,610*		$126,000	**599,232**
Total	*Pounds*	**72,857,692**	**10,269,302**	**3,066,988**	**1,650,000**		**87,843,982**
Total	*Sales*	***$ 72,806,242***	**$ 20,404,841**	**$ 4,114,110**	**$20,100,000**		**$ 117,425,193**

**All pounds converted to live weight/in the shell*

Compiled by the Pacific Coast Shellfish Growers Association.

All production data represents most recent info available:

Sources of information: Alaska Dept of Fish and Game, (2009)
Oregon Dept of Agriculture (2009)
Powell, Seiler and Co, Certified Public Accountants for Willapa (2008)
Shellfish companies in California (2008) and Washington (2008, 2009)

Thanks to Jim Gibbons and Ted Kuiper for assistance in compiling data

STATE OF ALASKA
DEPARTMENT OF
COMMERCE
COMMUNITY AND
ECONOMIC DEVELOPMENT
Office of the Commissioner

Sean Parnell, Governor
Susan K. Bell, Commissioner

January 26, 2011

Representative Steve Thompson, Chair
House Fisheries Committee
State Capitol, Rm 428
Juneau, Alaska 99801

Re: House Bill 121 – Loan Funds: Charter/Mariculture/Microloan

Dear Representative Thompson,

Please accept this request for your consideration to schedule HB 121 before the House Fisheries Committee at your earliest convenience.

This bill would create the Alaska microloan revolving loan program, the mariculture revolving loan fund, and the commercial charter fisheries revolving loan fund, within the Department of Commerce, Community, and Economic Development. The programs would be set up as revolving loan funds so that all earnings and loan payments would be retained by the funds for future loans. All operating expenses would also be paid from earnings of the fund.

This legislation will promote economic development in Alaska by helping small businesses access critically needed capital, a new loan program has been developed that is modeled after a program currently operated through the federal Small Business Administration (SBA) and available in every other state. The SBA program, known as the Microloan Program, provides small, short-term loans to small businesses. This federal program, however, is not currently available in Alaska because an intermediary lender is required and to date no lenders meeting the SBA's qualifications have been identified in Alaska.

This legislation will promote economic development by providing Alaska's mariculture industry with critically needed access to capital allowing the industry to expand and successfully compete in world seafood markets. Currently access to start-up capital by Alaska's mariculturists is very limited due to the time needed for crop development and market readiness. It has been determined that due to the unique cash flow characteristics inherent in the industry access to capital with flexible terms is essential.

Additionally, on January 5, 2010 the North Pacific Fisheries Management Council published a final rule implementing a halibut charter fisheries limited entry program. It is expected that 40% of those captains applying for the permit based on past fishing history will be denied under NOAA's restrictions. This has resulted in escalating permit prices while quota has been reduced making it difficult for those to remain in business. In an effort to make financing available to Alaskans for the purchase of halibut charter permits, while helping to ensure those valuable permits remain in Alaskan's hands, a new loan fund has been developed that is similar to the highly successful commercial fishing revolving loan fund (AS 16.10.340).

P.O. Box 110800, Juneau, Alaska 99811-0800
Telephone: (907) 465-2500 Fax: (907) 465-5442 Text Telephone: (907) 465-5437
Email: questions@alaska.gov Website: http://www.commerce.alaska.gov/

If you have any questions regarding this bill, please feel free to contact Curtis Thayer, Deputy Commissioner of Commerce, Community and Economic Development at 296-8100, or Wanetta Ayers, Director of Division of Economic Development at 269-4903.

Sincerely,

Susan K. Bell
Commissioner

STATE OF ALASKA
DEPARTMENT OF
COMMERCE
COMMUNITY AND
ECONOMIC DEVELOPMENT
Office of the Commissioner

Sean Parnell, Governor
Susan K. Bell, Commissioner

House Bill 121
Sectional Analysis

Section 1. Amends AS 16.10 by adding new sections:

16.10.801 – Commercial charter fisheries revolving loan fund

This section creates a revolving loan fund for commercial charter fisheries within the department of Commerce, Community and Economic Development. The loan fund consists of money that has been appropriated, transferred, or receive by gift/donation to the fund; principal and interest earned on investment of the fund; money that has been collected through foreclosure; or appropriations from the legislature.

16.10.805 – Powers and duties of the department

This section outlines the powers and duties of the Department of Commerce, Community and Economic Development as it pertains to the commercial charter fisheries loan fund.

16.10.810 – Eligibility

This section outlines the eligibility requirement for an applicant to receive a commercial fisheries loan. Some of the requirements the applicant must meet are being a resident of the state; qualify for the purchase of a charter halibut permit; purchase, construct, or upgrade an existing charter halibut fishing vessel; and must not be eligible for financing or only able to obtain a portion of the total loan from a recognized commercial lending institution.

16.10.815 – Limitations on loans

This section outlines the limits on the commercial fisheries loans. Some of the limitations are that the loan may not exceed $100,000; may not exceed a term of 15 years; may not be made to a person who has past due child support obligations.

16.10.820 – Default

This section states that if the borrower defaults upon a note the department shall notify the borrower about the default and consequences by mailing a notice to the borrower's most recent address.

16.10.825 – Special account established

This section establishes a special account within the commercial charter fisheries revolving loan fund a foreclosure expense account in which the department may spend money credited to this account when necessary to protect the state's security interest in collateral on loans or foreclosure proceedings.

16.10.830 – Disposal of property acquired after default

This section states that the department shall dispose of property acquired from the default on a loan in a manner that best serves the interest of the state.

16.10.835 – Waiver of confidentiality

This section states that the commissioner of Commerce, Community and Economic Development may release information about the borrower's loan if the borrower has given authorization to do so.

P.O. Box 110800, Juneau, Alaska 99811-0800
Telephone: (907) 465-2500 Fax: (907) 465-5442 Text Telephone: (907) 465-5437
Email: questions@alaska.gov Website: http://www.commerce.alaska.gov/

16.10.890 – Definitions

This section defines commissioner and department to be from Commerce, Community and Economic Development.

Section 2. Amends AS 16.10 by adding new sections:

16.10.900 – Mariculture revolving loan fund

This section creates a mariculture revolving loan fund within the department of Commerce, Community and Economic Development. The loan fund consists of money that has been appropriated, transferred, or receive by gift/donation to the fund; principal and interest earned on investment of the fund; money that has been collected through foreclosure; or appropriations from the legislature.

16.10.905 – Powers and duties of the department

This section outlines the powers and duties of the Department of Commerce, Community and Economic Development as it pertains to the mariculture revolving loan fund.

16.10.910 – Eligibility

This section outlines the eligibility requirement for an applicant to receive a mariculture revolving loan. Some of the requirements the applicant must meet are being a resident of the state; have a permitted mariculture farm location in the state; have one year of experience/training in the mariculture industry; and must not be eligible for financing or only able to obtain a portion of the total loan from a recognized commercial lending institution.

16.10.915 – Limitations on loans

This section outlines the limits on the mariculture revolving loans. Some of the limitations are that the loan may not exceed $100,000; may not exceed a term of 20 years; and may not be made to a person who has past due child support obligations.

16.10.920 – Repayment of principal and interest on loans

This section state that the department may not require the repayment of the principal on the loan for six years from the date the loan is made.

16.10.925 – Default

This section states that if the borrower defaults upon a note the department shall notify the borrower about the default and consequences by mailing a notice to the borrower's most recent address.

16.10.930 – Special account established

This section establishes a special account within the mariculture revolving loan fund a foreclosure expense account in which the department may spend money credited to this account when necessary to protect the state's security interest in collateral on loans or foreclosure proceedings.

16.10.935 – Disposal of property acquired after default

This section states that the department shall dispose of property acquired from the default on a loan in a manner that best serves the interest of the state.

16.10.940 – Waiver of confidentiality

This section states that the commissioner of Commerce, Community and Economic Development may release information about the borrower's loan if the borrower has given authorization to do so.

16.10.945 – Definitions

This section defines commissioner and department to be from Commerce, Community and Economic Development and also defined mariculture as the farming of shellfish, echinoderms, seaweeds, and algae.

Section 3. Amends AS 44.33 by adding new sections:

44.33.950 – Alaska microloan revolving loan fund

This section creates a microloan revolving loan fund within the department of Commerce, Community and Economic Development. The loan fund consists of money that has been appropriated, transferred, or receive by gift/donation to the fund; principal and interest earned on investment of the fund; money that has been collected through foreclosure; or appropriations from the legislature.

44.33.955 – Powers and duties of the department

This section outlines the powers and duties of the Department of Commerce, Community and Economic Development as it pertains to the microloan revolving loan fund.

44.33.960 – Eligibility

This section outlines the eligibility requirement for an applicant to receive a microloan revolving loan. The requirements the applicant must meet are being a resident of the state and provide a reasonable amount of money from other non-state sources for use on any project the loan money will be used.

44.33.965 – Limitations on loans

This section outlines the limits on the microloan revolving loans. The department may use money from this fund to make loans of up to $35,000 to a person, or loans of up to $70,000 to two or more persons. The loans may not exceed a term of six years and may not be made to a person who has past due child support obligations.

44.33.970 – Special account established

This section establishes a special account within the Alaska microloan revolving loan fund a foreclosure expense account in which the department may spend money credited to this account when necessary to protect the state's security interest in collateral on loans or foreclosure proceedings.

44.33.975 – Default

This section states that if the borrower defaults upon a note the department shall notify the borrower about the default and consequences by mailing a notice to the borrower's most recent address.

44.33.980 – Disposal of property acquired after default

This section states that the department shall dispose of property acquired from the default on a loan in a manner that best serves the interest of the state.

16.10.940 – Waiver of confidentiality

This section states that the commissioner of Commerce, Community and Economic Development may release information about the borrower's loan if the borrower has given authorization to do so.

16.10.945 – Definitions

This section defines commissioner and department to be Commerce, Community and Economic Development.

Section 4. Amends the Uncodified law of the State of Alaska

Adds a new section that state the Department of Commerce, Community and Economic Development may adopt regulations to implement this Act

Section 5. Effective date clause

Immediate effective date

Prepared by: Crystal Koeneman
Department: CCED
Phone: 465.2503
e-mail: [redacted]

Alaskan Shellfish Growers Association

February 4, 2011

Representative Steve Thompson, chair
House Special Committee on Fisheries
Room 428 State Capitol
Juneau, AK 99801

Dear Representative Thompson:

Governor Sean Parnell's legislation to establish a mariculture revolving loan program (HB 121) will help provide a needed boost to one of the most promising small business opportunities in economically distressed communities from the Panhandle to Kodiak. The Alaskan Shellfish Grower's Association (ASGA) urges you to hear the legislation as soon as possible and pass it on to the Resources with unanimous "do pass" recommendations.

The loan fund is patterned after the state's salmon hatchery loan program, a key component of what might be the most successful economic development initiatives by the State of Alaska. The long-term loans allowed private nonprofit hatcheries to cover construction and front-end operating costs while they undertook cooperative planning efforts with ADF&G and built cost recovery programs to repay the loans. The result is one of the most successful salmon enhancement programs in the world and huge economic contributions to the economies of coastal communities from Kodiak to Ketchikan.

Those Gulf of Alaska communities certainly need an economic boost now as outmigration of residents is startling. Consider the population projections by state economists for two census areas in the region: (1) Prince of Wales had 6,995 residents in 1996, but may drop to 3,894 in 2030, or a 56.6 percent decrease; and (2) Skagway-Hoonah-Angoon, 3,823-1,945, 62.2 percent decrease.

A broad coalition of community leaders, Native organizations, university, state and federal officials have identified shellfish farming as one of the top economic development opportunities in efforts to rebuild the economy of the Tongass National Forest. Overcoming high front-end costs and a long lag in revenues has been identified as the biggest obstacle to development of more shellfish farms.

HB 121 tackles that issue head-on with terms of up to 20 years and the ability to avoid interest accrual up to the first six years of a loan. The kind of terms provide the farmer with the ability of getting the farming operation going and build sales revenues before interest begins accruing and have to be made. To create a business with enough sales revenues to support a living wage, cover operating expenses, pay state lease and permit fees, and meet loan payments, a new oyster farmer might have to invest $150,000 in

capital and forego salary for 3-4 years. Another $10,000 will be spent paying tidelands lease fees and meeting DEC harvesting and processing requirements before revenues begin flowing.

It takes 3-4 years to move a crop of oysters through a farm and geoduck clams might take 8 years. Once yearly crops begin rotating through the farm a steady income flow is created.

Numerous new shellfish farms are developing in Southeast as two unique mariculture "incubator" projects produce their first crop of "graduates." Five new farmers recently completed Naukati's "Weekend Warrior" program and Sealaska has created joint ventures in Kake and Yakutat that are supporting eight shellfish farming apprentices in four new small businesses. The loan fund would be a tremendous help to these new small business operators.

Governor Parnell's legislation is the best solution to the major roadblock to creation of an industry composed of independent small businesses located in rural Alaska. That's why the legislation also is supported by the Southeast Conference (a unique coalition of communities and businesses) and the Southeast Shellfish Mariculture Coalition (Sealaska, Yak-Tat Kwaan, Organized Village of Kake, Shaan-Seet, Organized Village of Kasaan, Alaska Oyster Cooperative, OceansAlaska and ASGA).

I'd be pleased to provide any additional information you may require. Thank you for considering our request.

Sincerely,

Rodger Painter
ASGA President

c.c. Representative Craig Johnson
Representative Alan Austerman
Representative Bob Herron
Representative Lance Pruitt
Representative Scott Kawasaki
Representative Bob Miller

SWAMC

Southwest Alaska Municipal Conference

3300 Arctic Boulevard, Suite 203 Anchorage, AK 99503 p: 907.562.7380 f: 888.356.1206 www.swamc.org

Alaska Peninsula
Aleutian Chain
Bristol Bay
Kodiak Island
Pribilof Islands

February 8, 2011

Dear Governor Parnell,

This letter is written in support of SB 67 and HB 121, two bills aimed at creating a micro revolving loan fund for the State of Alaska. Access to startup and working capital is a key component of starting new enterprises and creating jobs in Alaska, and many rural Alaskans do not have access to this type of capital.

In Southwest Alaska, a revolving loan fund could help boat owners or smaller fish processors with equipment purchases. It could assist bed and breakfast owners with upgrades to their homes and business. Or it could provide much-needed construction capital to mechanics, service providers, and a host of other small business startups and entrepreneurs.

Alaska is one of only four states in the nation that do not have a microloan program and this bill would resolve that and fill an unmet need that would help small businesses, which is why SWAMC supports it. This is especially true in the more remote and rural regions of Alaska, where traditional financial institutions may not be familiar with local economic conditions and are sometimes more reluctant to invest.

Our organization believes SB 67 and HB 121 are valuable bills with great potential. I hope it can help add to Alaska's efforts to support our small businesses and entrepreneurs.

Sincerely,
SOUTHWEST ALASKA MUNICIPAL CONFERENCE

Andy Varner

Executive Director

HOUSE COMMITTEE REPO

(7)
Date Referred to Committee: January 24, 2011

FURTHER REFERRALS: Resources
Finance

Date of Committee Action: 2/24/11

The HOUSE SPECIAL COMMITTEE ON FISHERIES considered: **HB 121**

HOUSE BILL NO. 121
"An Act establishing the commercial charter fisheries revolving loan fund, the mariculture revolving loan fund, and the Alaska microloan revolving loan fund and relating to those funds and loans from those funds; and providing for an effective date."

HB 121-LOAN FUNDS:CHARTERS/MARICULTURE/MICROLOAN

Recommends it be replaced with [ ] HCS *or* **[✓] CS** *for* HB 121 (FSH)
For Senate Bills with new title: [ ] Technical Title [✓] New Title: HCR _____ **[ ] Same Title [ ] New Title**

[ ] attach amendments
[ ] add new referral to _____Committee
[ ] Letter of Intent_____Committee

List of Abbrev for Depts.:
ADM
CED
COR
CRT
EED
DEC
DFG
GOV
DHS
LWF
LAW
LEG
MVA
DNR
DPS
REV
DOT
UA

***NEW* FISCAL NOTES**
*FN# is assigned by Chief Clerk's Office

*FN#	List by Dept(s):	Fiscal	Indet.	Zero
	CED	✓		
	CED	✓		
	CED	✓		
	CED	✓		

***PREVIOUS* FISCAL NOTES**

FN#	List by Dept(s):	Fiscal	Indet.	Zero

Signing with recommendations	Printed Last Name	DP	DNP	NR	AM
Robert J. Miller	MILLER	X			
	Pruitt	X			
	Johnson			X	
	Austerman	X			
Chair: Alan M Thompson	THOMPSON	X			
Chair:					

CS FOR HOUSE BILL NO. 121(FSH)

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-SEVENTH LEGISLATURE - FIRST SESSION

BY THE HOUSE SPECIAL COMMITTEE ON FISHERIES

Offered:
Referred:

Sponsor(s): HOUSE RULES COMMITTEE BY REQUEST OF THE GOVERNOR

A BILL

FOR AN ACT ENTITLED

"An Act relating to loans made to commercial fishermen under the Commercial Fishing Loan Act for product quality improvements and energy efficiency upgrades; establishing the commercial charter fisheries revolving loan fund, the mariculture revolving loan fund, and the Alaska microloan revolving loan fund and relating to those funds and loans from those funds; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

*** Section 1.** AS 16.10.320 is amended by adding a new subsection to read:

(*l*) For a new loan under AS 16.10.300 - 16.10.370, made on or after the effective date of this Act, the department may provide a reduction of the interest rate of not more than two percent if at least 50 percent of the loan proceeds are used by the borrower for product quality improvements or energy efficiency upgrades if the improvements or upgrades use products manufactured or produced in the state. When the department offers a reduction under this subsection, the department shall provide

the reduction to all loan applicants who meet the criterion described in this subsection. In this subsection, "manufactured or produced" means processing, developing, or making an item into a new item with a distinct character and use.

*** Sec. 2.** AS 16.10 is amended by adding new sections to read:

Article 13. Commercial Charter Fisheries Revolving Loan Fund.

Sec. 16.10.801. Commercial charter fisheries revolving loan fund. (a) The commercial charter fisheries revolving loan fund is created in the Department of Commerce, Community, and Economic Development to carry out the purposes of AS 16.10.801 - 16.10.890.

(b) The commercial charter fisheries revolving loan fund consists of the following:

(1) money appropriated to, transferred to, or received by gift, grant, devise, bequest, or donation to the fund;

(2) principal and interest payments or other income earned on loans or investments of the fund;

(3) money chargeable to principal or interest that is collected through liquidation by foreclosure or other process on loans made under AS 16.10.801 - 16.10.890.

(c) Money in the fund may be used by the legislature to make appropriations for costs of administering AS 16.10.801 - 16.10.890.

Sec. 16.10.805. Powers and duties of the department. The department may

(1) make loans to eligible applicants under AS 16.10.801 - 16.10.890

(A) for the purchase of charter halibut permits;

(B) for the purchase or construction of a charter halibut fishing vessel;

(C) to upgrade existing charter halibut fishing vessels and gear for the purpose of improving engine fuel efficiency;

(D) to refinance debt obligations made by other lenders more than 12 months before the department received the loan application and incurred by an applicant for the purchase of charter halibut fishing vessels or gear if the applicant otherwise qualifies for a loan under AS 16.10.801 -

16.10.890; the department may collect a refinancing loan origination charge as provided by regulation;

(2) receive, take, hold, and administer any appropriation, transfer, gift, grant, bequest, devise, or donation of money for the fund;

(3) establish amortization plans for repayment of loans, including extensions of the terms of loans;

(4) allow an assumption of a loan if

(A) the applicant meets the requirements established under this section; and

(B) approval of the assumption would be consistent with the purposes of AS 16.10.801 - 16.10.890;

(5) establish the rate of interest for loans consistent with law;

(6) charge and collect fees for services provided under AS 16.10.801 - 16.10.890;

(7) adopt regulations under AS 44.62 necessary to carry out the provisions of AS 16.10.801 - 16.10.890, including regulations to establish reasonable fees for services provided; and

(8) designate agents and delegate powers as necessary to the agents.

Sec. 16.10.810. Eligibility. (a) For an applicant to be eligible for a loan under AS 16.10.801 - 16.10.890, the applicant shall be a resident of the state, as determined under (c) of this section, and shall

(1) qualify for the purchase of a charter halibut permit under applicable law;

(2) qualify as a transferee for a charter halibut permit under applicable law;

(3) purchase or construct a charter halibut fishing vessel; or

(4) upgrade an existing charter halibut fishing vessel or gear for the purpose of improving engine fuel efficiency.

(b) In addition to the requirements set out in (a) of this section, the applicant

(1) may not be eligible for financing from other recognized commercial lending institutions; or

(2) shall be able to obtain only a portion of the total loan request from a recognized commercial lending institution.

(c) To meet the residency requirements of (a) of this section, the applicant

(1) shall physically reside in this state and maintain a domicile in this state during the 24 consecutive months preceding the date of application for the program; and

(2) may not have

(A) declared or established residency in another state; or

(B) received residency or a benefit based on residency from another state.

Sec. 16.10.815. Limitations on loans. (a) Except as provided in (b) of this section, a loan under AS 16.10.801 - 16.10.890

(1) may not exceed $100,000 a year;

(2) may not exceed a term of 15 years, except for extensions under AS 16.10.805;

(3) may not bear interest at a rate greater than the prime rate, as defined in AS 44.88.599, plus two percentage points, but which may not be less than three percent per year and not more than 10 1/2 percent a year;

(4) must be secured by a first priority lien on collateral acceptable to the commissioner; and

(5) may not be made to a person who has a past due child support obligation established by court order or by the child support services agency under AS 25.27.160 - 25.27.220 at the time of application.

(b) The interest rate for loans for the improvement of engine fuel efficiency must be two percentage points below the prime rate, as defined in AS 44.88.599, but may not be less than three percent a year and not more than 10 1/2 percent a year.

(c) The total balances outstanding on loans made to a borrower under AS 16.10.805 may not exceed $300,000.

(d) After the initial interest rate is set under (a) or (b) of this section for a loan made under AS 16.10.801 - 16.10.890, the department may provide a reduction of the interest rate of not more than two percent if at least 50 percent of the loan proceeds are

used by the borrower for engine fuel efficiency improvements if the upgrades use products manufactured or produced in the state. When the department offers a reduction under this subsection, the department shall provide the reduction to all loan applicants who meet the criterion described in this subsection. In this subsection, "manufactured or produced" means processing, developing, or making an item into a new item with a distinct character and use.

Sec. 16.10.820. Default. If the borrower defaults on a note, the department shall notify the borrower of the default and the consequences of default by mailing a notice to the borrower's most recent address provided to the department by the borrower or obtained by the department.

Sec. 16.10.825. Special account established. (a) The foreclosure expense account is established as a special account within the commercial charter fisheries revolving loan fund.

(b) The department may expend money credited to the foreclosure expense account when necessary to protect the state's security interest in collateral on loans granted under AS 16.10.815 or to defray expenses incurred during foreclosure proceedings after an obligor defaults.

Sec. 16.10.830. Disposal of property acquired after default. The department shall dispose of property acquired through default of a loan made under AS 16.10.801 - 16.10.890. Disposal must be made in a manner that serves the best interest of the state and may include the amortization of payments over a period of years.

Sec. 16.10.835. Waiver of confidentiality. The commissioner may release information about the borrower's loan to any individual if release of the information has been authorized by the borrower.

Sec. 16.10.890. Definitions. In AS 16.10.801 - 16.10.890,

(1) "commissioner" means the commissioner of commerce, community, and economic development;

(2) "department" means the Department of Commerce, Community, and Economic Development.

Article 14. Mariculture Revolving Loan Fund.

Sec. 16.10.900. Mariculture revolving loan fund. (a) The mariculture

revolving loan fund is created within the Department of Commerce, Community, and Economic Development to carry out the purposes of AS 16.10.900 - 16.10.945.

(b) The mariculture revolving loan fund consists of the following:

(1) money appropriated to, transferred to, or received by gift, grant, devise, bequest, or donation to the fund;

(2) principal and interest payments or other income earned on loans or investments of the fund; and

(3) money chargeable to principal or interest that is collected through liquidation by foreclosure or other process on loans made under AS 16.10.900 - 16.10.945.

(c) Money in the fund may be used by the legislature to make appropriations for costs of administering AS 16.10.900 - 16.10.945.

Sec. 16.10.905. Powers and duties of the department. The department may

(1) make loans to eligible applicants under AS 16.10.900 - 16.10.945 for the planning, construction, and operation of a mariculture business;

(2) receive, take, hold, and administer any appropriation, transfer, gift, grant, bequest, devise, or donation of money for the fund;

(3) establish amortization plans for repayment of loans, including extensions of the terms of loans;

(4) allow an assumption of a loan if

(A) the applicant meets the requirements established under this section; and

(B) approval of the assumption would be consistent with the purposes of AS 16.10.900 - 16.10.945;

(5) establish the rate of interest for loans consistent with law;

(6) charge and collect fees for services provided under AS 16.10.900 - 16.10.945;

(7) adopt regulations under AS 44.62 necessary to carry out the provisions of AS 16.10.900 - 16.10.945, including regulations to establish reasonable fees for services provided; and

(8) designate agents and delegate powers as necessary to the agents.

Sec. 16.10.910. Eligibility. (a) For an applicant to be eligible for a loan under AS 16.10.900 - 16.10.945, the applicant shall

(1) be a resident of the state, as determined under (c) of this section;

(2) have a permitted mariculture farm location in this state; and

(3) have experience or training in the mariculture industry.

(b) In addition to the requirements set out in (a) of this section, the applicant

(1) may not be eligible for financing from other recognized commercial lending institutions; or

(2) shall be able to obtain only a portion of the total loan request from a recognized commercial lending institution.

(c) To meet the residency requirements of (a) of this section, the applicant

(1) shall physically reside in this state and maintain a domicile in this state during the 24 consecutive months preceding the date of application for the program; and

(2) may not have

(A) declared or established residency in another state; or

(B) received residency or a benefit based on residency from another state.

Sec. 16.10.915. Limitations on loans. (a) Except as provided in (b) and (c) of this section, a loan under AS 16.10.900 - 16.10.945

(1) may not exceed $100,000 a year;

(2) may not exceed a term of 20 years, except for extensions under AS 16.10.905;

(3) may not bear interest at a rate greater than the prime rate, as defined in AS 44.88.599, plus one percentage point, but which may not be less than five percent a year and not more than nine percent a year;

(4) must be secured by a first priority lien on collateral acceptable to the department; and

(5) may not be made to a person who has a past due child support obligation established by court order or by the child support services agency under AS 25.27.160 - 25.27.220 at the time of application.

(b) Subsequent loans may be made to the borrower under AS 16.10.910 if the total of the balances outstanding on the loans received by the borrower does not exceed $300,000.

(c) A loan under AS 16.10.910 may be made for the purchase of boats or vessels determined to be integral to the operation of the farm.

(d) For a loan made under AS 16.10.900 - 16.10.945, the department may provide a reduction of the interest rate of not more than two percent if at least 50 percent of the loan proceeds are used by the borrower for purchasing products manufactured or produced in the state. When the department offers a reduction under this subsection, the department shall provide the reduction to all loan applicants who meet the criterion described in this subsection. In this subsection, "manufactured or produced" means processing, developing, or making an item into a new item with a distinct character and use.

Sec. 16.10.920. Repayment of principal of and interest on loans. The department may not require the repayment of principal and interest on a loan made under AS 16.10.910 during the first six years of the loan. Interest on the principal of a loan made under AS 16.10.910 may be deferred for a period of not more than the first six years of the loan.

Sec. 16.10.925. Default. If the borrower defaults on a note, the department shall notify the borrower of the default and the consequences of default by mailing a notice to the borrower's most recent address provided to the department by the borrower or obtained by the department.

Sec. 16.10.930. Special account established. (a) The foreclosure expense account is established as a special account in the mariculture revolving loan fund.

(b) The department may expend money credited to the foreclosure expense account when necessary to protect the state's security interest in collateral on loans granted under AS 16.10.910 or to defray expenses incurred during foreclosure proceedings after an obligor defaults.

Sec. 16.10.935. Disposal of property acquired after default. The department shall dispose of property acquired through default of a loan made under AS 16.10.900 - 16.10.945. Disposal must be made in a manner that serves the best interest of the

state and may include the amortization of payments over a period of years.

Sec. 16.10.940. Waiver of confidentiality. The commissioner may release information about the borrower's loan to any individual if release of the information has been authorized by the borrower.

Sec. 16.10.945. Definitions. In AS 16.10.900 - 16.10.945,

(1) "commissioner" means the commissioner of commerce, community, and economic development;

(2) "department" means the Department of Commerce, Community, and Economic Development;

(3) "mariculture" means the farming of shellfish and aquatic plants as defined in AS 16.40.199.

*** Sec. 3.** AS 44.33 is amended by adding new sections to read:

Article 15. Alaska Microloan Revolving Loan Fund.

Sec. 44.33.950. Alaska microloan revolving loan fund. (a) The Alaska microloan revolving loan fund is created in the Department of Commerce, Community, and Economic Development to carry out the purposes of AS 44.33.950 - 44.33.990.

(b) The Alaska microloan revolving loan fund consists of the following:

(1) money appropriated to, transferred to, or received by gift, grant, devise, bequest, or donation to the fund;

(2) principal and interest payments or other income earned on loans or investments of the fund;

(3) money chargeable to principal or interest that is collected through liquidation by foreclosure or other process on loans made under AS 44.33.950 - 44.33.990.

(c) Money in the fund may be used by the legislature to make appropriations for costs of administering AS 44.33.950 - 44.33.990.

Sec. 44.33.955. Powers and duties of the department. The department may

(1) make loans to eligible applicants under AS 44.33.950 - 44.33.990 to be used for working capital, equipment, construction, or other commercial purposes by a business located in the state;

(2) receive, take, hold, and administer any appropriation, transfer, gift, grant, bequest, devise, or donation of money for the fund;

(3) establish amortization plans for repayment of loans, including extensions of the terms of loans;

(4) allow an assumption of a loan if

(A) the applicant meets the requirements established under this section; and

(B) approval of the assumption would be consistent with the purposes of AS 44.33.950 - 44.33.990;

(5) establish the rate of interest for loans consistent with law;

(6) charge and collect fees for services provided under AS 44.33.950 - 44.33.990;

(7) adopt regulations under AS 44.62 necessary to carry out the provisions of AS 44.33.950 - 44.33.990, including regulations to establish reasonable fees for services provided; and

(8) designate agents and delegate powers as necessary to the agents.

Sec. 44.33.960. Eligibility. (a) For an applicant to be eligible for a loan under AS 44.33.950 - 44.33.990, the applicant shall

(1) be a resident of the state, as determined under (b) of this section;

(2) provide a reasonable amount of money from other nonstate sources for use on any project or enterprise for which money from a loan will be used; and

(3) if the requested loan amount is $35,000 or more, provide to the department a document from a state financial institution stating that

(A) the applicant has been denied a loan for the same purpose; or

(B) a loan from the financial institution is contingent on the applicant also receiving a loan from the fund.

(b) To meet the residency requirements of (a) of this section, the applicant

(1) shall physically reside in this state and maintain a domicile in this state during the 12 consecutive months preceding the date of application for the program; and

(2) may not have

(A) declared or established residency in another state; or

(B) received residency or a benefit based on residency from another state.

Sec. 44.33.965. Limitations on loans. (a) The department may use money from the Alaska microloan revolving loan fund to make loans of up to $35,000 to a person or loans of up to $70,000 to two or more persons.

(b) A loan under AS 44.33.950 - 44.33.990

(1) may not exceed a term of six years, except for extensions under AS 44.33.955;

(2) may not bear interest at a rate greater than the prime rate, as defined in AS 44.88.599, plus one percentage point but which may not be less than six percent a year and not more than eight percent a year;

(3) must be secured by collateral acceptable to the commissioner; and

(4) may not be made to a person who has a past due child support obligation established by court order or by the child support services agency under AS 25.27.160 - 25.27.220 at the time of application.

Sec. 44.33.970. Special account established. (a) The foreclosure expense account is established as a special account in the Alaska microloan revolving loan fund.

(b) The department may expend money credited to the foreclosure expense account when necessary to protect the state's security interest in collateral on loans granted under AS 44.33.960 or to defray expenses incurred during foreclosure proceedings after an obligor defaults.

Sec. 44.33.975. Default. If the borrower defaults on a note, the department shall notify the borrower of the default and the consequences of default by mailing a notice to the borrower's most recent address provided to the department by the borrower or obtained by the department.

Sec. 44.33.980. Disposal of property acquired after default. The department shall dispose of property acquired through default of a loan made under AS 44.33.950 - 44.33.990. Disposal must be made in a manner that serves the best interest of the

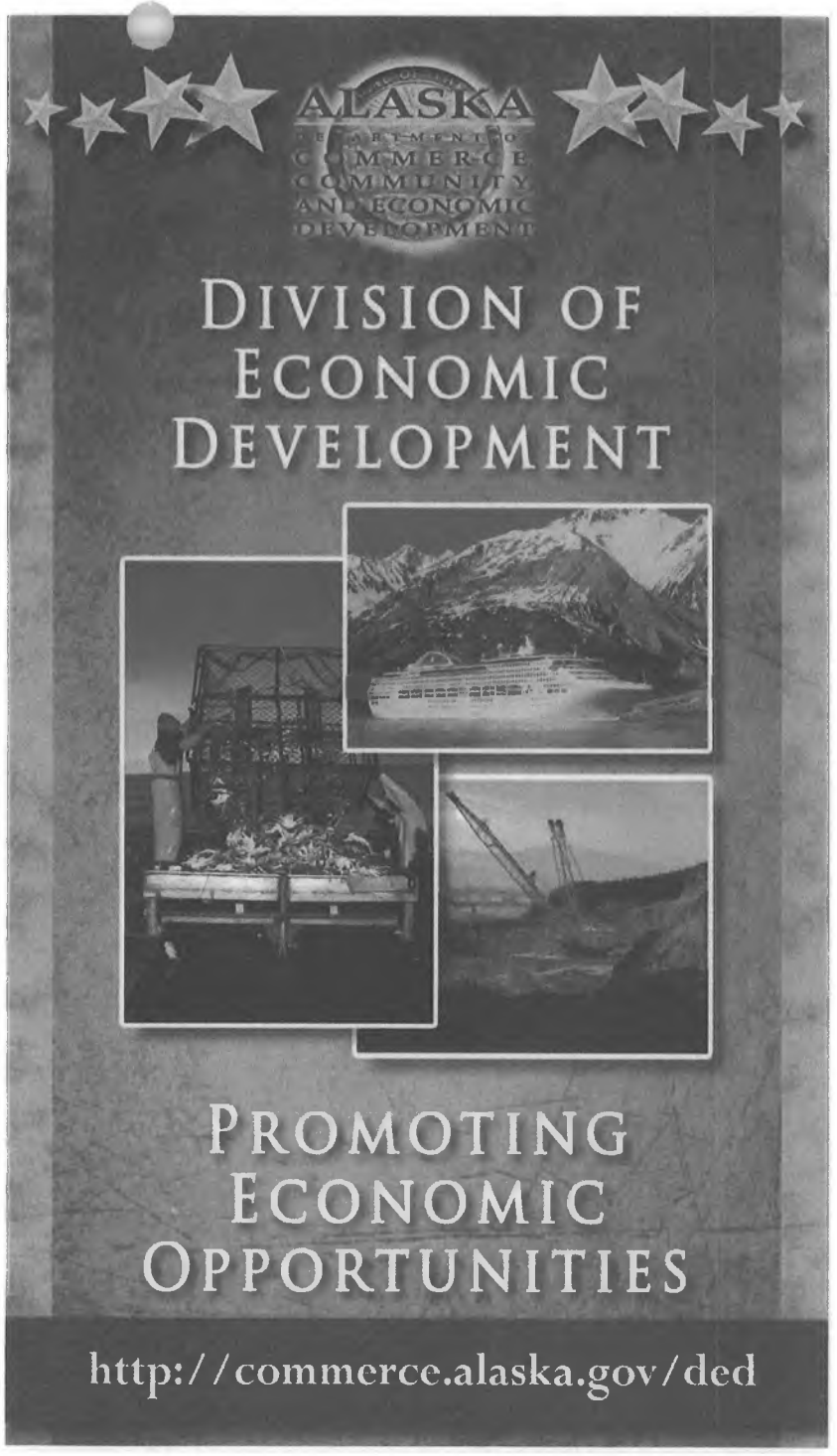
state and may include the amortization of payments over a period of years.

Sec. 44.33.990. Definitions. In AS 44.33.950 - 44.33.990,

(1) "commissioner" means the commissioner of commerce, community, and economic development;

(2) "department" means the Department of Commerce, Community, and Economic Development.

*** Sec. 4.** This Act takes effect immediately under AS 01.10.070(c).



HB 121

Commercial Charter Fisheries Revolving Loan Fund

Mariculture Revolving Loan Fund

Alaska Microloan Revolving Loan Fund

House Fisheries Committee

Tuesday, February 8, 2011

HB 121 – Revolving Loan Funds

- A Suite of Three Revolving Loan Funds

	Commercial Charter Fisheries	Mariculture	Microloans
Capitalization	$5,000.0	$3,000.0	$3,500.0
Loan Limit	$100.0	$100.0	$35.0/$70.0
Term	15 years	20 years	6 years
Interest	may not exceed Prime + 2	may not exceed Prime + 1	may not exceed Prime + 1
Floor/Ceiling	3 – 10.5%	5 – 9 %	6 – 8%
		Delayed Repayment & Accrual	

HB 121 – Revolving Loan Funds

Background

- All three funds are set up as revolving loan funds
- All earnings, loan repayments and fees would be retained by the fund for future loans.
- All operating expenses would also be paid from earnings of the fund

HB 121 – Revolving Loan Funds

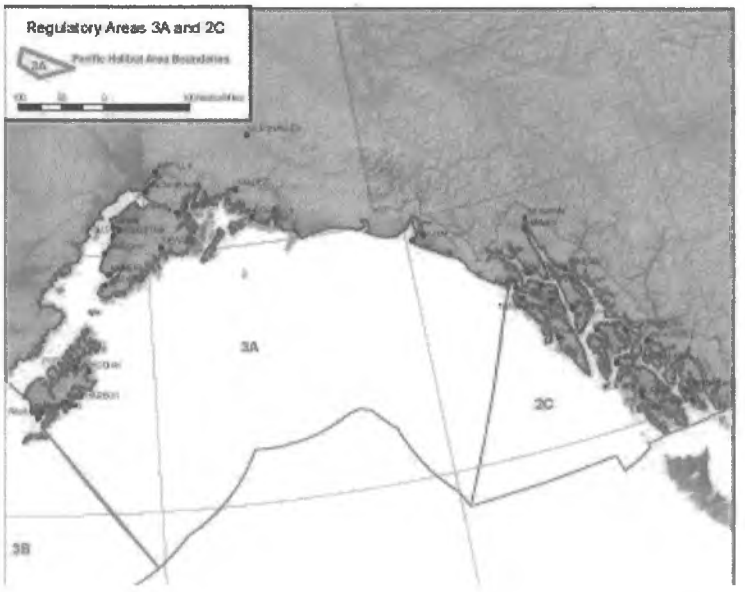
Background

Input from:

- ADEPT/Legacy Working Groups
- Non-Governmental Organizations and Trade Associations
- Commissioner's Economic Advisors Council
- ARDORs
- CDQs
- ANCSA Corporations

HB 121 – Revolving Loan Funds

- Commercial Charter Fisheries Revolving Loan Fund



Current Halibut Charter Activity

Effective February 1, 2011 all vessel operators in Areas 2C and 3A with charter anglers onboard catching and retaining Pacific halibut must have an original, valid Charter Halibut Permit (CHP).

Based on log books NOAA estimates 532 Eligible Permitees; some 800 applications were received.

Permit prices are still being established in the marketplace. Current asking prices range from $40,000 to over $100,000 depending on the number of fishermen the permit allows.

HB 121 – Revolving Loan Funds

- Commercial Charter Fisheries Revolving Loan Fund
    - Provide access to capital for Alaskan-owned Charters
    - Repatriate permits to Alaska
    - Increase economic benefits from this sector

By offering a loan program to Alaska residents, business owners will have greater access to capital when purchasing permits over non-residents. This in turn should allow Alaska business owners to repatriate more permits than otherwise using traditional financing. Additionally, with Alaska's year-round residents owning permits, Alaska's economy will realize more of the benefits associated with the sport/charter industry. Resident's contribution to the local economy will be greater than non-resident permit holders as they circulate funds in the economy year round.

HB 121 – Revolving Loan Funds

- Commercial Charter Fisheries Revolving Loan Fund

Loan Fund Features

	Commercial Charter Fisheries
Capitalization	$5,000.0
Loan Limit	$100.0
Term	15 years
Interest	may not exceed Prime + 2
Floor/Ceiling	3 – 10.5%

HB 121 – Revolving Loan Funds

- Mariculture Revolving Loan Fund

  Current Mariculture Activity

  - 67 permitted farms
  - 25 producing farms
    - Ten farms in Southeast Alaska
    - 15 farms in Southcentral Alaska

HB 121 – Revolving Loan Funds

- Mariculture Revolving Loan Fund

  Current Mariculture Activity

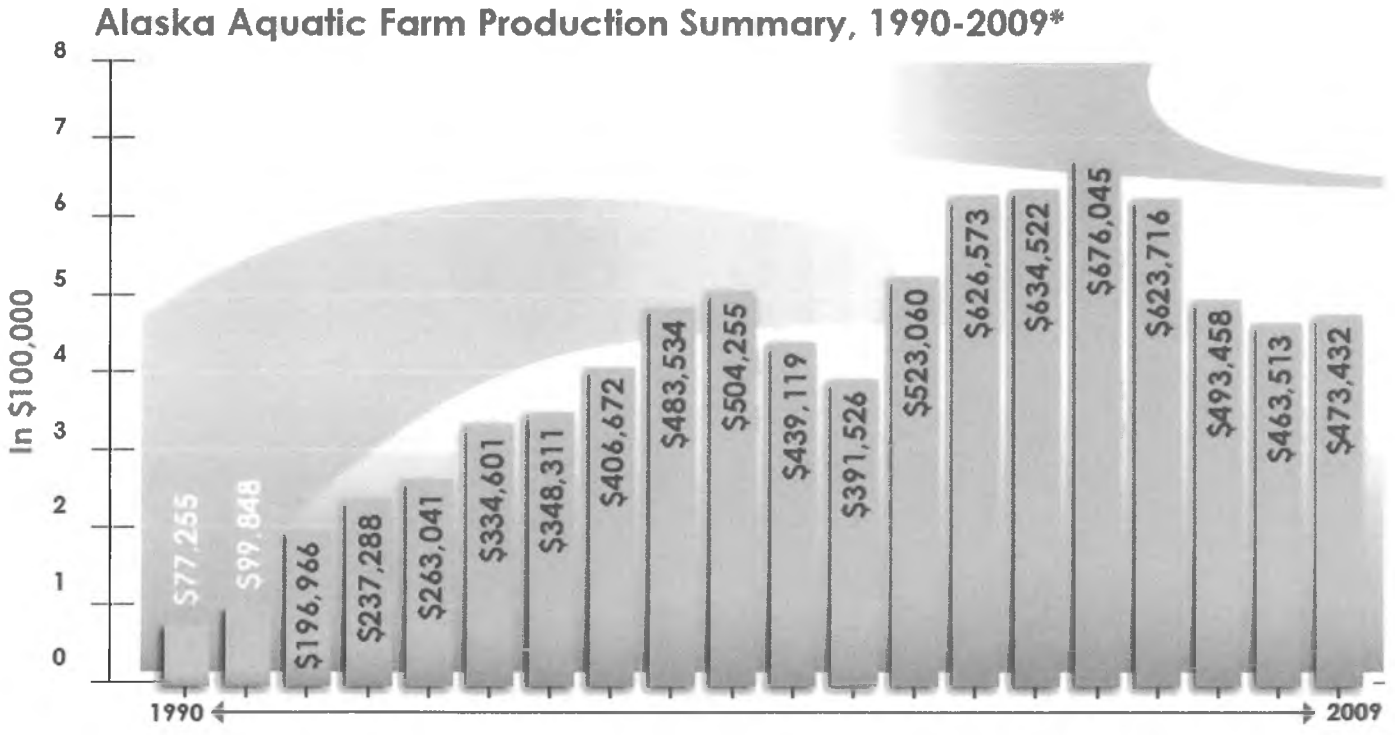
  Regulated By

  - Department of Fish & Game
    - Commercial Fisheries Division/Mariculture Program
  - Department of Natural Resources
    - Aquatic Farm Lease Program
  - Department of Environmental Conservation
    - Food Safety and Sanitation Program/Shellfish Section
  - Alaska Coastal Management Program

HB 121 – Revolving Loan Funds

- Mariculture Revolving Loan Fund

Current Mariculture Activity



*Numbers generated from the Mariculture Information Database.
Production was taken directly from the *Aquatic Farm Operation Permit Annual Reports*.
Production numbers listed here do not include hatchery or flupsy (nursery) sales.

Prepared by the Department of Commerce, Community and Economic Development

HB 121 – Revolving Loan Funds

- Mariculture Revolving Loan Fund

  Current Mariculture Activity

  Training Resources

    Alaska Sea Grant/Marine Advisory Program
      Mariculture research education and extension
      NOAA Mariculture Initiative

    Collaborative Research

    Alaska Shellfish Growers Association
      EDA grant to write best management practices for the industry

HB 121 – Revolving Loan Funds

- Mariculture Revolving Loan Fund

Loan Fund Features

	Mariculture
Capitalization	$3,000.0
Loan Limit	$100.0
Term	20 years
Interest	may not exceed Prime + 1
Floor/Ceiling	5 – 9 %
	Delayed Repayment & Accrual

HB 121 – Revolving Loan Funds

- Alaska Microloan Revolving Loan Fund

26th Legislature (2009-2010)
Bill History/Action for 26 Legislature

BILL: HB 412 **SHORT TITLE:** MICROLOAN REVOLVING FUND

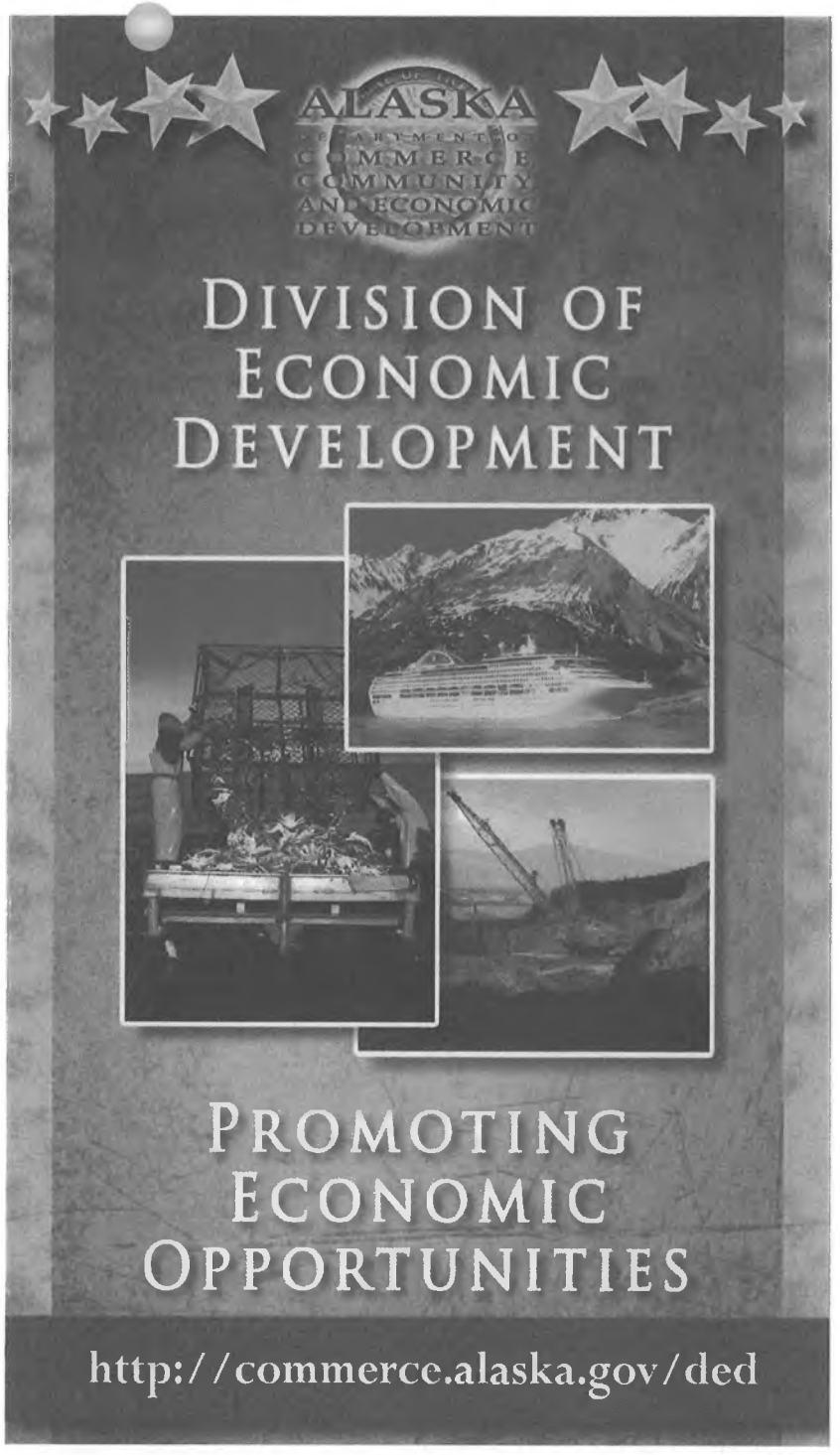
04/13/10 - PASSED Y40

HB 121 – Revolving Loan Funds

- Alaska Microloan Revolving Loan Fund

Loan Fund Features

	Microloans
Capitalization	$3,500.0
Loan Limit	$35.0/$70.0
Term	6 years
Interest	Prime + 1
Floor/Ceiling	6 – 8%



HB 121

Commercial Charter Fisheries Revolving Loan Fund

Mariculture Revolving Loan Fund

Alaska Microloan Revolving Loan Fund

House Fisheries Committee

Tuesday, February 8, 2011

Wanetta Ayers, Director
Division of Economic Development
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LEGAL SERVICES

DIVISION OF LEGAL AND RESEARCH SERVICES
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Deliveries to: 129 6th St., Rm. 329

MEMORANDUM February 14, 2011

SUBJECT: Transition section of CSHB 121(FSH)
(Work Order 27-GH1728\B)

TO: Representative Steve Thompson
Chair of the House Special Committee on Fisheries
Attn: Jomo Stewart

FROM: Brian J. Kane BJK
Legislative Counsel

I have drafted the CS for HB 121 as you requested, but I have made one additional change that I would like to call to your attention.

I have deleted section 4 from the bill, a transition section that stated that the department could adopt regulations to implement this Act. The department already has the authority to adopt regulations to implement the statutory sections in the bill, as that power is expressly given to the department in each section. Occasionally, you may see a scenario where a bill has some sections that do not take effect until a later set date, but the regulations are allowed to be adopted immediately. That is not the case here, as the transition section and the rest of the bill have the same effective date. Thus, there is no reason to have this transition section relating to regulations.

If I may be of further assistance, please advise.

BJK:ljw
11-103.ljw

Enclosure

27-GH1728\B
Kane
2/14/11

CS FOR HOUSE BILL NO. 121(FSH)

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-SEVENTH LEGISLATURE - FIRST SESSION

BY THE HOUSE SPECIAL COMMITTEE ON FISHERIES

Offered:
Referred:

Sponsor(s): HOUSE RULES COMMITTEE BY REQUEST OF THE GOVERNOR

A BILL

FOR AN ACT ENTITLED

"An Act relating to loans made to commercial fishermen under the Commercial Fishing Loan Act for product quality improvements and energy efficiency upgrades; establishing the commercial charter fisheries revolving loan fund, the mariculture revolving loan fund, and the Alaska microloan revolving loan fund and relating to those funds and loans from those funds; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

*** Section 1.** AS 16.10.320 is amended by adding a new subsection to read:

(*l*) For a new loan under AS 16.10.300 - 16.10.370, made on or after the effective date of this Act, the department may provide a reduction of the interest rate of not more than two percent if at least 50 percent of the loan proceeds are used by the borrower for product quality improvements or energy efficiency upgrades if the improvements or upgrades use products manufactured or produced in the state. When the department offers a reduction under this subsection, the department shall provide

the reduction to all loan applicants who meet the criterion described in this subsection. In this subsection, "manufactured or produced" means processing, developing, or making an item into a new item with a distinct character and use.

* **Sec. 2.** AS 16.10 is amended by adding new sections to read:

Article 13. Commercial Charter Fisheries Revolving Loan Fund.

Sec. 16.10.801. Commercial charter fisheries revolving loan fund. (a) The commercial charter fisheries revolving loan fund is created in the Department of Commerce, Community, and Economic Development to carry out the purposes of AS 16.10.801 - 16.10.890.

(b) The commercial charter fisheries revolving loan fund consists of the following:

(1) money appropriated to, transferred to, or received by gift, grant, devise, bequest, or donation to the fund;

(2) principal and interest payments or other income earned on loans or investments of the fund;

(3) money chargeable to principal or interest that is collected through liquidation by foreclosure or other process on loans made under AS 16.10.801 - 16.10.890.

(c) Money in the fund may be used by the legislature to make appropriations for costs of administering AS 16.10.801 - 16.10.890.

Sec. 16.10.805. Powers and duties of the department. The department may

(1) make loans to eligible applicants under AS 16.10.801 - 16.10.890

(A) for the purchase of charter halibut permits;

(B) for the purchase or construction of a charter halibut fishing vessel;

(C) to upgrade existing charter halibut fishing vessels and gear for the purpose of improving engine fuel efficiency;

(D) to refinance debt obligations made by other lenders more than 12 months before the department received the loan application and incurred by an applicant for the purchase of charter halibut fishing vessels or gear if the applicant otherwise qualifies for a loan under AS 16.10.801 -

16.10.890; the department may collect a refinancing loan origination charge as provided by regulation;

(2) receive, take, hold, and administer any appropriation, transfer, gift, grant, bequest, devise, or donation of money for the fund;

(3) establish amortization plans for repayment of loans, including extensions of the terms of loans;

(4) allow an assumption of a loan if

(A) the applicant meets the requirements established under this section; and

(B) approval of the assumption would be consistent with the purposes of AS 16.10.801 - 16.10.890;

(5) establish the rate of interest for loans consistent with law;

(6) charge and collect fees for services provided under AS 16.10.801 - 16.10.890;

(7) adopt regulations under AS 44.62 necessary to carry out the provisions of AS 16.10.801 - 16.10.890, including regulations to establish reasonable fees for services provided; and

(8) designate agents and delegate powers as necessary to the agents.

Sec. 16.10.810. Eligibility. (a) For an applicant to be eligible for a loan under AS 16.10.801 - 16.10.890, the applicant shall be a resident of the state, as determined under (c) of this section, and shall

(1) qualify for the purchase of a charter halibut permit under applicable law;

(2) qualify as a transferee for a charter halibut permit under applicable law;

(3) purchase or construct a charter halibut fishing vessel; or

(4) upgrade an existing charter halibut fishing vessel or gear for the purpose of improving engine fuel efficiency.

(b) In addition to the requirements set out in (a) of this section, the applicant

(1) may not be eligible for financing from other recognized commercial lending institutions; or

(2) shall be able to obtain only a portion of the total loan request from a recognized commercial lending institution.

(c) To meet the residency requirements of (a) of this section, the applicant

(1) shall physically reside in this state and maintain a domicile in this state during the 24 consecutive months preceding the date of application for the program; and

(2) may not have

(A) declared or established residency in another state; or

(B) received residency or a benefit based on residency from another state.

Sec. 16.10.815. Limitations on loans. (a) Except as provided in (b) of this section, a loan under AS 16.10.801 - 16.10.890

(1) may not exceed $100,000; per by year

(2) may not exceed a term of 15 years, except for extensions under AS 16.10.805;

(3) may not bear interest at a rate greater than the prime rate, as defined in AS 44.88.599, plus two percentage points, but which may not be less than three percent per year and not more than 10 1/2 percent a year;

(4) must be secured by a first priority lien on collateral acceptable to the commissioner; and

(5) may not be made to a person who has a past due child support obligation established by court order or by the child support services agency under AS 25.27.160 - 25.27.220 at the time of application.

(b) The interest rate for loans for the improvement of engine fuel efficiency must be two percentage points below the prime rate, as defined in AS 44.88.599, but may not be less than three percent a year and not more than 10 1/2 percent a year.

(c) The total balances outstanding on loans made to a borrower under AS 16.10.805 may not exceed $300,000.

(d) After the initial interest rate is set under (a) or (b) of this section for a loan made under AS 16.10.801 - 16.10.890, the department may provide a reduction of the interest rate of not more than two percent if at least 50 percent of the loan proceeds are

used by the borrower for engine fuel efficiency improvements if the upgrades use products manufactured or produced in the state. When the department offers a reduction under this subsection, the department shall provide the reduction to all loan applicants who meet the criterion described in this subsection. In this subsection, "manufactured or produced" means processing, developing, or making an item into a new item with a distinct character and use.

Sec. 16.10.820. Default. If the borrower defaults on a note, the department shall notify the borrower of the default and the consequences of default by mailing a notice to the borrower's most recent address provided to the department by the borrower or obtained by the department.

Sec. 16.10.825. Special account established. (a) The foreclosure expense account is established as a special account within the commercial charter fisheries revolving loan fund.

(b) The department may expend money credited to the foreclosure expense account when necessary to protect the state's security interest in collateral on loans granted under AS 16.10.815 or to defray expenses incurred during foreclosure proceedings after an obligor defaults.

Sec. 16.10.830. Disposal of property acquired after default. The department shall dispose of property acquired through default of a loan made under AS 16.10.801 - 16.10.890. Disposal must be made in a manner that serves the best interest of the state and may include the amortization of payments over a period of years.

Sec. 16.10.835. Waiver of confidentiality. The commissioner may release information about the borrower's loan to any individual if release of the information has been authorized by the borrower.

Sec. 16.10.890. Definitions. In AS 16.10.801 - 16.10.890,

(1) "commissioner" means the commissioner of commerce, community, and economic development;

(2) "department" means the Department of Commerce, Community, and Economic Development.

Article 14. Mariculture Revolving Loan Fund.

Sec. 16.10.900. Mariculture revolving loan fund. (a) The mariculture

revolving loan fund is created within the Department of Commerce, Community, and Economic Development to carry out the purposes of AS 16.10.900 - 16.10.945.

(b) The mariculture revolving loan fund consists of the following:

(1) money appropriated to, transferred to, or received by gift, grant, devise, bequest, or donation to the fund;

(2) principal and interest payments or other income earned on loans or investments of the fund; and

(3) money chargeable to principal or interest that is collected through liquidation by foreclosure or other process on loans made under AS 16.10.900 - 16.10.945.

(c) Money in the fund may be used by the legislature to make appropriations for costs of administering AS 16.10.900 - 16.10.945.

Sec. 16.10.905. Powers and duties of the department. The department may

(1) make loans to eligible applicants under AS 16.10.900 - 16.10.945 for the planning, construction, and operation of a mariculture business;

(2) receive, take, hold, and administer any appropriation, transfer, gift, grant, bequest, devise, or donation of money for the fund;

(3) establish amortization plans for repayment of loans, including extensions of the terms of loans;

(4) allow an assumption of a loan if

(A) the applicant meets the requirements established under this section; and

(B) approval of the assumption would be consistent with the purposes of AS 16.10.900 - 16.10.945;

(5) establish the rate of interest for loans consistent with law;

(6) charge and collect fees for services provided under AS 16.10.900 - 16.10.945;

(7) adopt regulations under AS 44.62 necessary to carry out the provisions of AS 16.10.900 - 16.10.945, including regulations to establish reasonable fees for services provided; and

(8) designate agents and delegate powers as necessary to the agents.

Sec. 16.10.910. Eligibility. (a) For an applicant to be eligible for a loan under AS 16.10.900 - 16.10.945, the applicant shall

(1) be a resident of the state, as determined under (c) of this section;

(2) have a permitted mariculture farm location in this state; and

(3) have experience or training in the mariculture industry.

(b) In addition to the requirements set out in (a) of this section, the applicant

(1) may not be eligible for financing from other recognized commercial lending institutions; or

(2) shall be able to obtain only a portion of the total loan request from a recognized commercial lending institution.

(c) To meet the residency requirements of (a) of this section, the applicant

(1) shall physically reside in this state and maintain a domicile in this state during the 24 consecutive months preceding the date of application for the program; and

(2) may not have

(A) declared or established residency in another state; or

(B) received residency or a benefit based on residency from another state.

Sec. 16.10.915. Limitations on loans. (a) Except as provided in (b) and (c) of this section, a loan under AS 16.10.900 - 16.10.945

(1) may not exceed $100,000 a year;

(2) may not exceed a term of 20 years, except for extensions under AS 16.10.905;

(3) may not bear interest at a rate greater than the prime rate, as defined in AS 44.88.599, plus one percentage point, but which may not be less than five percent a year and not more than nine percent a year;

(4) must be secured by a first priority lien on collateral acceptable to the department; and

(5) may not be made to a person who has a past due child support obligation established by court order or by the child support services agency under AS 25.27.160 - 25.27.220 at the time of application.

(b) Subsequent loans may be made to the borrower under AS 16.10.910 if the total of the balances outstanding on the loans received by the borrower does not exceed $300,000.

(c) A loan under AS 16.10.910 may be made for the purchase of boats or vessels determined to be integral to the operation of the farm.

(d) For a loan made under AS 16.10.900 - 16.10.945, the department may provide a reduction of the interest rate of not more than two percent if at least 50 percent of the loan proceeds are used by the borrower for purchasing products manufactured or produced in the state. When the department offers a reduction under this subsection, the department shall provide the reduction to all loan applicants who meet the criterion described in this subsection. In this subsection, "manufactured or produced" means processing, developing, or making an item into a new item with a distinct character and use.

Sec. 16.10.920. Repayment of principal of and interest on loans. The department may not require the repayment of principal on a loan made under AS 16.10.910 during the first six years of the loan. Interest on the principal of a loan made under AS 16.10.910 does not accrue during the first six years of the loan.

Sec. 16.10.925. Default. If the borrower defaults on a note, the department shall notify the borrower of the default and the consequences of default by mailing a notice to the borrower's most recent address provided to the department by the borrower or obtained by the department.

Sec. 16.10.930. Special account established. (a) The foreclosure expense account is established as a special account in the mariculture revolving loan fund.

(b) The department may expend money credited to the foreclosure expense account when necessary to protect the state's security interest in collateral on loans granted under AS 16.10.910 or to defray expenses incurred during foreclosure proceedings after an obligor defaults.

Sec. 16.10.935. Disposal of property acquired after default. The department shall dispose of property acquired through default of a loan made under AS 16.10.900 - 16.10.945. Disposal must be made in a manner that serves the best interest of the state and may include the amortization of payments over a period of years.

Sec. 16.10.940. Waiver of confidentiality. The commissioner may release information about the borrower's loan to any individual if release of the information has been authorized by the borrower.

Sec. 16.10.945. Definitions. In AS 16.10.900 - 16.10.945,

(1) "commissioner" means the commissioner of commerce, community, and economic development;

(2) "department" means the Department of Commerce, Community, and Economic Development;

(3) "mariculture" means the farming of shellfish and aquatic plants as defined in AS 16.40.199.

* **Sec. 3.** AS 44.33 is amended by adding new sections to read:

Article 15. Alaska Microloan Revolving Loan Fund.

Sec. 44.33.950. Alaska microloan revolving loan fund. (a) The Alaska microloan revolving loan fund is created in the Department of Commerce, Community, and Economic Development to carry out the purposes of AS 44.33.950 - 44.33.990.

(b) The Alaska microloan revolving loan fund consists of the following:

(1) money appropriated to, transferred to, or received by gift, grant, devise, bequest, or donation to the fund;

(2) principal and interest payments or other income earned on loans or investments of the fund;

(3) money chargeable to principal or interest that is collected through liquidation by foreclosure or other process on loans made under AS 44.33.950 - 44.33.990.

(c) Money in the fund may be used by the legislature to make appropriations for costs of administering AS 44.33.950 - 44.33.990.

Sec. 44.33.955. Powers and duties of the department. The department may

(1) make loans to eligible applicants under AS 44.33.950 - 44.33.990 to be used for working capital, equipment, construction, or other commercial purposes by a business located in the state;

(2) receive, take, hold, and administer any appropriation, transfer, gift,

grant, bequest, devise, or donation of money for the fund;

(3) establish amortization plans for repayment of loans, including extensions of the terms of loans;

(4) allow an assumption of a loan if

(A) the applicant meets the requirements established under this section; and

(B) approval of the assumption would be consistent with the purposes of AS 44.33.950 - 44.33.990;

(5) establish the rate of interest for loans consistent with law;

(6) charge and collect fees for services provided under AS 44.33.950 - 44.33.990;

(7) adopt regulations under AS 44.62 necessary to carry out the provisions of AS 44.33.950 - 44.33.990, including regulations to establish reasonable fees for services provided; and

(8) designate agents and delegate powers as necessary to the agents.

Sec. 44.33.960. Eligibility. (a) For an applicant to be eligible for a loan under AS 44.33.950 - 44.33.990, the applicant shall

(1) be a resident of the state, as determined under (b) of this section;

(2) provide a reasonable amount of money from other nonstate sources for use on any project or enterprise for which money from a loan will be used; and

(3) if the requested loan amount is $35,000 or more, provide to the department a document from a state financial institution stating that

(A) the applicant has been denied a loan for the same purpose; or

(B) a loan from the financial institution is contingent on the applicant also receiving a loan from the fund.

(b) To meet the residency requirements of (a) of this section, the applicant

(1) shall physically reside in this state and maintain a domicile in this state during the 12 consecutive months preceding the date of application for the program; and

(2) may not have

(A) declared or established residency in another state; or

(B) received residency or a benefit based on residency from another state.

Sec. 44.33.965. Limitations on loans. (a) The department may use money from the Alaska microloan revolving loan fund to make loans of up to $35,000 to a person or loans of up to $70,000 to two or more persons.

(b) A loan under AS 44.33.950 - 44.33.990

(1) may not exceed a term of six years, except for extensions under AS 44.33.955;

(2) may not bear interest at a rate greater than the prime rate, as defined in AS 44.88.599, plus one percentage point but which may not be less than six percent a year and not more than eight percent a year;

(3) must be secured by collateral acceptable to the commissioner; and

(4) may not be made to a person who has a past due child support obligation established by court order or by the child support services agency under AS 25.27.160 - 25.27.220 at the time of application.

Sec. 44.33.970. Special account established. (a) The foreclosure expense account is established as a special account in the Alaska microloan revolving loan fund.

(b) The department may expend money credited to the foreclosure expense account when necessary to protect the state's security interest in collateral on loans granted under AS 44.33.960 or to defray expenses incurred during foreclosure proceedings after an obligor defaults.

Sec. 44.33.975. Default. If the borrower defaults on a note, the department shall notify the borrower of the default and the consequences of default by mailing a notice to the borrower's most recent address provided to the department by the borrower or obtained by the department.

Sec. 44.33.980. Disposal of property acquired after default. The department shall dispose of property acquired through default of a loan made under AS 44.33.950 - 44.33.990. Disposal must be made in a manner that serves the best interest of the state and may include the amortization of payments over a period of years.

Sec. 44.33.990. Definitions. In AS 44.33.950 - 44.33.990,

(1) "commissioner" means the commissioner of commerce, community, and economic development;

(2) "department" means the Department of Commerce, Community, and Economic Development.

*** Sec. 4.** This Act takes effect immediately under AS 01.10.070(c).

STATE OF ALASKA
DEPARTMENT OF
COMMERCE
COMMUNITY AND
ECONOMIC DEVELOPMENT
Office of the Commissioner

Sean Parnell, Governor
Susan K. Bell, Commissioner

January 26, 2011

Representative Steve Thompson, Chair
House Fisheries Committee
State Capitol, Rm 428
Juneau, Alaska 99801

Re: House Bill 121 – Loan Funds: Charter/Mariculture/Microloan

Dear Representative Thompson,

Please accept this request for your consideration to schedule HB 121 before the House Fisheries Committee at your earliest convenience.

This bill would create the Alaska microloan revolving loan program, the mariculture revolving loan fund, and the commercial charter fisheries revolving loan fund, within the Department of Commerce, Community, and Economic Development. The programs would be set up as revolving loan funds so that all earnings and loan payments would be retained by the funds for future loans. All operating expenses would also be paid from earnings of the fund.

This legislation will promote economic development in Alaska by helping small businesses access critically needed capital, a new loan program has been developed that is modeled after a program currently operated through the federal Small Business Administration (SBA) and available in every other state. The SBA program, known as the Microloan Program, provides small, short-term loans to small businesses. This federal program, however, is not currently available in Alaska because an intermediary lender is required and to date no lenders meeting the SBA's qualifications have been identified in Alaska.

This legislation will promote economic development by providing Alaska's mariculture industry with critically needed access to capital allowing the industry to expand and successfully compete in world seafood markets. Currently access to start-up capital by Alaska's mariculturists is very limited due to the time needed for crop development and market readiness. It has been determined that due to the unique cash flow characteristics inherent in the industry access to capital with flexible terms is essential.

Additionally, on January 5, 2010 the North Pacific Fisheries Management Council published a final rule implementing a halibut charter fisheries limited entry program. It is expected that 40% of those captains applying for the permit based on past fishing history will be denied under NOAA's restrictions. This has resulted in escalating permit prices while quota has been reduced making it difficult for those to remain in business. In an effort to make financing available to Alaskans for the purchase of halibut charter permits, while helping to ensure those valuable permits remain in Alaskan's hands, a new loan fund has been developed that is similar to the highly successful commercial fishing revolving loan fund (AS 16.10.340).

P.O. Box 110800, Juneau, Alaska 99811-0800
Telephone: (907) 465-2500 Fax: (907) 465-5442 Text Telephone: (907) 465-5437
Email: questions@alaska.gov Website: http://www.commerce.alaska.gov/

If you have any questions regarding this bill, please feel free to contact Curtis Thayer, Deputy Commissioner of Commerce, Community and Economic Development at 296-8100, or Wanetta Ayers, Director of Division of Economic Development at 269-4903.

Sincerely,

Susan K. Bell
Commissioner

STATE OF ALASKA
DEPARTMENT OF
COMMERCE
COMMUNITY AND
ECONOMIC DEVELOPMENT

Office of the Commissioner

Sean Parnell, Governor
Susan K. Bell, Commissioner

House Bill 121

Sectional Analysis

Section 1. Amends AS 16.10 by adding new sections:

16.10.801 – Commercial charter fisheries revolving loan fund

This section creates a revolving loan fund for commercial charter fisheries within the department of Commerce, Community and Economic Development. The loan fund consists of money that has been appropriated, transferred, or receive by gift/donation to the fund; principal and interest earned on investment of the fund; money that has been collected through foreclosure; or appropriations from the legislature.

16.10.805 – Powers and duties of the department

This section outlines the powers and duties of the Department of Commerce, Community and Economic Development as it pertains to the commercial charter fisheries loan fund.

16.10.810 – Eligibility

This section outlines the eligibility requirement for an applicant to receive a commercial fisheries loan. Some of the requirements the applicant must meet are being a resident of the state; qualify for the purchase of a charter halibut permit; purchase, construct, or upgrade an existing charter halibut fishing vessel; and must not be eligible for financing or only able to obtain a portion of the total loan from a recognized commercial lending institution.

16.10.815 – Limitations on loans

This section outlines the limits on the commercial fisheries loans. Some of the limitations are that the loan may not exceed $100,000; may not exceed a term of 15 years; may not be made to a person who has past due child support obligations.

16.10.820 – Default

This section states that if the borrower defaults upon a note the department shall notify the borrower about the default and consequences by mailing a notice to the borrower's most recent address.

16.10.825 – Special account established

This section establishes a special account within the commercial charter fisheries revolving loan fund a foreclosure expense account in which the department may spend money credited to this account when necessary to protect the state's security interest in collateral on loans or foreclosure proceedings.

16.10.830 – Disposal of property acquired after default

This section states that the department shall dispose of property acquired from the default on a loan in a manner that best serves the interest of the state.

16.10.835 – Waiver of confidentiality

This section states that the commissioner of Commerce, Community and Economic Development may release information about the borrower's loan if the borrower has given authorization to do so.

P.O. Box 110800, Juneau, Alaska 99811-0800
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Email: questions@alaska.gov Website: http://www.commerce.alaska.gov/

16.10.890 – Definitions

This section defines commissioner and department to be from Commerce, Community and Economic Development.

Section 2. Amends AS 16.10 by adding new sections:

16.10.900 – Mariculture revolving loan fund

This section creates a mariculture revolving loan fund within the department of Commerce, Community and Economic Development. The loan fund consists of money that has been appropriated, transferred, or receive by gift/donation to the fund; principal and interest earned on investment of the fund; money that has been collected through foreclosure; or appropriations from the legislature.

16.10.905 – Powers and duties of the department

This section outlines the powers and duties of the Department of Commerce, Community and Economic Development as it pertains to the mariculture revolving loan fund.

16.10.910 – Eligibility

This section outlines the eligibility requirement for an applicant to receive a mariculture revolving loan. Some of the requirements the applicant must meet are being a resident of the state; have a permitted mariculture farm location in the state; have one year of experience/training in the mariculture industry; and must not be eligible for financing or only able to obtain a portion of the total loan from a recognized commercial lending institution.

16.10.915 – Limitations on loans

This section outlines the limits on the mariculture revolving loans. Some of the limitations are that the loan may not exceed $100,000; may not exceed a term of 20 years; and may not be made to a person who has past due child support obligations.

16.10.920 – Repayment of principal and interest on loans

This section state that the department may not require the repayment of the principal on the loan for six years from the date the loan is made.

16.10.925 – Default

This section states that if the borrower defaults upon a note the department shall notify the borrower about the default and consequences by mailing a notice to the borrower's most recent address.

16.10.930 – Special account established

This section establishes a special account within the mariculture revolving loan fund a foreclosure expense account in which the department may spend money credited to this account when necessary to protect the state's security interest in collateral on loans or foreclosure proceedings.

16.10.935 – Disposal of property acquired after default

This section states that the department shall dispose of property acquired from the default on a loan in a manner that best serves the interest of the state.

16.10.940 – Waiver of confidentiality

This section states that the commissioner of Commerce, Community and Economic Development may release information about the borrower's loan if the borrower has given authorization to do so.

16.10.945 – Definitions

This section defines commissioner and department to be from Commerce, Community and Economic Development and also defined mariculture as the farming of shellfish, echinoderms, seaweeds, and algae.

Section 3. Amends AS 44.33 by adding new sections:

44.33.950 – Alaska microloan revolving loan fund

This section creates a microloan revolving loan fund within the department of Commerce, Community and Economic Development. The loan fund consists of money that has been appropriated, transferred, or receive by gift/donation to the fund; principal and interest earned on investment of the fund; money that has been collected through foreclosure; or appropriations from the legislature.

44.33.955 – Powers and duties of the department

This section outlines the powers and duties of the Department of Commerce, Community and Economic Development as it pertains to the microloan revolving loan fund.

44.33.960 – Eligibility

This section outlines the eligibility requirement for an applicant to receive a microloan revolving loan. The requirements the applicant must meet are being a resident of the state and provide a reasonable amount of money from other non-state sources for use on any project the loan money will be used.

44.33.965 – Limitations on loans

This section outlines the limits on the microloan revolving loans. The department may use money from this fund to make loans of up to $35,000 to a person, or loans of up to $70,000 to two or more persons. The loans may not exceed a term of six years and may not be made to a person who has past due child support obligations.

44.33.970 – Special account established

This section establishes a special account within the Alaska microloan revolving loan fund a foreclosure expense account in which the department may spend money credited to this account when necessary to protect the state's security interest in collateral on loans or foreclosure proceedings.

44.33.975 – Default

This section states that if the borrower defaults upon a note the department shall notify the borrower about the default and consequences by mailing a notice to the borrower's most recent address.

44.33.980 – Disposal of property acquired after default

This section states that the department shall dispose of property acquired from the default on a loan in a manner that best serves the interest of the state.

16.10.940 – Waiver of confidentiality

This section states that the commissioner of Commerce, Community and Economic Development may release information about the borrower's loan if the borrower has given authorization to do so.

16.10.945 – Definitions

This section defines commissioner and department to be Commerce, Community and Economic Development.

Section 4. Amends the Uncodified law of the State of Alaska

Adds a new section that state the Department of Commerce, Community and Economic Development may adopt regulations to implement this Act

Section 5. Effective date clause

Immediate effective date

Prepared by: Crystal Koeneman
Department: CCED
Phone: 465.2503
e-mail: crystal.koeneman@alaska.gov

STATE OF ALASKA
Department of Commerce, Community, and Economic Development

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Director

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HB 141

<TARGET><BILL>HB 141</BILL><SUBJECT>HB 141</SUBJECT><COMM>HFSH27</COMM></TARGET>

IOUSE COMMITTEE REPOI

(7)
Date Referred to Committee: February 4, 2011 **FURTHER REFERRALS: Finance**

Date of Committee Action: _____

The HOUSE SPECIAL COMMITTEE ON FISHERIES considered: **HB 141**

HOUSE BILL NO. 141
"An Act relating to loans for the purchase of fishing quota shares by certain community quota entities; and providing for an effective date."

HB 141-LOANS TO COMMUNITY QUOTA ENTITIES/PERMITS

Recommends it be replaced with [ ] HCS *or* [ ] CS *for* _____(_____)
For Senate Bills with new title: [ ] Technical Title [ ] New Title: HCR_____ **[ ] Same Title [ ] New Title**

[ ] attach amendments
[ ] add new referral to _____Committee
[ ] Letter of Intent_____Committee

List of Abbrev for Depts.:
ADM
CED
COR
CRT
EED
DEC
DFG
GOV
DHS
LWF
LAW
LEG
MVA
DNR
DPS
REV
DOT
UA

NEW **FISCAL NOTES** *Assigned by Chief Clerk's Office				
List by Dept(s):	*FN#	Fiscal	Indet.	Zero
CED		X		

PREVIOUS **FISCAL NOTES**				
List by Dept(s):	FN#	Fiscal	Indet.	Zero

Signing with recommendations	Printed Last Name	DP	DNP	NR	AM
	Pruitt	X			
	Johnson			X	
	Kawasaki			X	
	Austerman	X			
Chair: Peter M Kiggen	Thompson	X			
Chair:					

Representative Alan Austerman

House Majority Leader

Alaska State Legislature

MEMORANDUM

To: Rep Steve Thompson, Fisheries Chair

From: Representative Alan Austerman

Date: February 4, 2011

RE: HB 141 & HB 140 Hearing Request

House Bill 141 establishes a revolving loan fund for the purchase of quota share by eligible communities as defined by the federal community quota entity program. The accompanying bill HB 140 appropriates the monies to the newly established fund. These two pieces of legislation are essential to promote participation in the community quota entity program and foster economic growth in rural coastal communities throughout the state.

I am requesting a hearing for HB 140 & HB 141 the week of February 14th, 2011. Attached you will find a copy of HB 140 & HB 141. My staff will follow this memorandum with a sponsor statement.

I will provide additional backup as it becomes available. Please let Steve Ricci of my staff know if there is anything else we can provide. Thank you for your consideration.

~ Representing Alaska State House District 36 ~

Akhiok | Igiugig | Iliamna | Karluk | Kodiak | Kakhonak | Larsen Bay | Levelock
Newhalen | Nondalton | Old Harbor | Ouzinkie | Pedro Bay | Port Alsworth | Port Lions

HOUSE BILL NO. 140

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-SEVENTH LEGISLATURE - FIRST SESSION

BY REPRESENTATIVE AUSTERMAN

Introduced: 2/4/11
Referred: Finance

Funding Information:	**General Fund**	**$ 45,000,000**
	Other Funds	**-0-**
	Total	**$ 45,000,000**

A BILL

FOR AN ACT ENTITLED

"An Act making a special appropriation to the community quota entity revolving loan fund; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

*** Section 1.** The sum of $45,000,000 is appropriated from the general fund to the community quota entity revolving loan fund (AS 16.10.345).

*** Sec. 2.** CONTINGENCY. The appropriation made in sec. 1 of this Act is contingent on passage by the Twenty-Seventh Alaska State Legislature in the First Regular Session and enactment into law of a bill creating the community quota entity revolving loan fund.

*** Sec. 3.** This Act takes effect July 1, 2011.

HB 144

<TARGET><BILL>HB 144</BILL><SUBJECT>HB 144</SUBJECT><COMM>HFSH27</COMM></TARGET>

ALASKA STATE LEGISLATURE

REPRESENTATIVE LES GARA

HB 144: Sponsor Statement
Requiring a DNR Report on Fishing Stream Access

Alaska's rivers are a treasured resource for fishermen, boaters, hunters, hikers, and people of all walks of life. We need to protect the public's access to them. House Bill 144 aims to ensure future public access to Alaska's fishing streams by putting in place a mechanism for voluntary land exchanges (or purchases) between the State and private owners along important recreational rivers. The program would be facilitated by the Department of Natural Resources and would be completely voluntary. It would not take land away from citizens who do not want to trade for other public land.

There are currently large stretches of private land on streams such as the Anchor River, Deep Creek, Parks Highway Streams, the Salcha River and others throughout the state. Today the public uses these streams, and has access to them. Once they're developed, we will never be able to afford to get them back. HB 144 requires the state to identify private lands along certain high value recreational waters for possible easement or land purchases or trades.

Other states have waited too long to take steps like the ones proposed by this bill. In Montana, for example, fishermen have to pay for public access to some rivers. One hundred eighty miles of the Missouri River have been lost to public access, and that state now budgets $300,000 per year to buy back parcels of riverbank land.

HB 144 will help ensure that unparalleled recreational opportunities in our vibrant river corridors remain accessible, for our own and for future generations. It provides that the state should take action by providing a plan to the legislature on an annual basis at the public access areas most at risk of loss.

January-May: State Capitol • Juneau, AK 99801-1182 • (907) 465-2647 • Fax (907) 465-3518
June-December: 716 W. 4th Avenue • Anchorage, AK 99501• (907) 269-0106• Fax (907) 269-0109
Representative_Les_Gara@legis.state.ak.us

HOUSE BILL NO. 144

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-SEVENTH LEGISLATURE - FIRST SESSION

BY REPRESENTATIVE GARA

Introduced: 2/7/11
Referred:

A BILL

FOR AN ACT ENTITLED

"An Act requiring the Department of Natural Resources annually to deliver to the legislature and the governor a report on fishing stream access."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

*** Section 1.** AS 38.04 is amended by adding a new section to article 4 to read:

Sec. 38.04.205. Fishing stream access report. (a) The department, in consultation with the commissioner of fish and game, shall annually, not later than the 10th day of each regular legislative session, provide to the legislature and the governor a report

(1) detailing the department's efforts during the previous year to maintain or enhance access to and along fishing streams;

(2) stating the department's objectives for enhancing and maintaining access to and along fishing streams by the public in the upcoming year.

(b) In this section, "fishing stream" means a stream with an appreciable sport, personal use dip net, commercial, or subsistence fish population.

ALASKA STATE LEGISLATURE

REPRESENTATIVE LES GARA

HB 144: Sectional Analysis
Requiring a DNR Report on Fishing Stream Access

The bill's sections provide as follows:

Section 1. This section requires the commissioner of the Department of Natural Resources to annually provide a report to the legislature and the governor detailing the efforts from the previous year, and objectives for the upcoming year, in maintaining and enhancing public access along fishing streams, where sport, personal use dip net, commercial, or subsistence fishing is conducted.

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Representative_Les_Gara@legis.state.ak.us

FISCAL NOTE

STATE OF ALASKA
2011 LEGISLATIVE SESSION

Fiscal Note Number
Bill Version **HB144**
() Publish Date

Identifier (file name) HB144-DFG-SFD-02-17-11
Dept. Affected ADF&G
Title Report on Fishing Stream Access
Appropriation Sport Fisheries
Allocation Sport Fisheries
Sponsor Representative Gara
Requester House Special Committee on Fisheries
OMB Component Number 464

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information					
OPERATING EXPENDITURES	**FY 2012**	**FY 2012**	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**
Personal Services	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Travel	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Services	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commodities	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Capital Outlay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grants	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Miscellaneous	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPERATING	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
CAPITAL EXPENDITURES							
CHANGE IN REVENUES							

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1003 GF Match	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1004 GF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1005 GF/Program Receipts	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1037 GF/Mental Health	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other (please identify)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Estimate of any current year (FY2011) cost 0.0

POSITIONS

Full-time	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Part-time	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temporary	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Why this fiscal note differs from previous version (if initial version, please note as such)

Initial version.

Prepared by Charles O. Swanton, Director
Phone 907-465-8184
Division Sport Fisheries
Date/Time 2/17/2011 12:00PM
Approved by Kevin Brooks, Administrative Services Director
Date 2/18/2011
Department of Fish and Game

(Revised 1/27/2011 OMB)

FISCAL NOTE

STATE OF ALASKA
2011 LEGISLATIVE SESSION

BILL NO. HB144

Analysis

The bill requires Department of Natural Resources to consult with the Commissioner of Fish & Game and annually report on fishing stream access. There is no fiscal impact to the Department of Fish & Game, Division of Sport Fisheries.

FISCAL NOTE

STATE OF ALASKA
2011 LEGISLATIVE SESSION

Fiscal Note Number
Bill Version **HB144**
() Publish Date

Identifier (file name) HB144-DNR-LATD-02-23-11
Title Report On Fishing Stream Access
Sponsor Rep. Gara
Requester House FSH

Dept. Affected Natural Resources
Appropriation Resource Development
Allocation Land Acquisition and Title Defense
OMB Component Number 2459

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information					
OPERATING EXPENDITURES	**FY 2012**	**FY 2012**	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**
Personal Services	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Travel	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Services	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commodities	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Capital Outlay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grants	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Miscellaneous	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPERATING	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
CAPITAL EXPENDITURES	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
CHANGE IN REVENUES	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1003 GF Match	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1004 GF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1005 GF/Program Receipts	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1037 GF/Mental Health	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other (please identify)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Estimate of any current year (FY2011) cost

POSITIONS

Full-time	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Part-time	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Temporary	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Why this fiscal note differs from previous version (if initial version, please note as such)

Not applicable, initial version

Prepared by Wyn Menefee, Acting Director
Division Mining, Land & Water
Approved by Daniel S. Sullivan
Department of Natural Resources

Phone 269-8501
Date/Time 2/18/11 1:00 PM
Date 2/18/2011

(Revised 1/27/2011 OMB)

FISCAL NOTE

STATE OF ALASKA
2011 LEGISLATIVE SESSION

BILL NO. HB 144

Analysis

HB 144 would require the Department of Natural Resources, in consultation with the Department of Fish & Game, to provide an annual report to the legislature detailing the department's efforts during the previous year, and objectives in the upcoming year, to maintain and enhance access to and along fishing streams.

The only additional work would be to compile this information into the annual report. Costs associated with preparing the report and including it in the Division of Mining, Land & Water's annual report to the legislature could be addressed with existing staff and resources.

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME

Division of Sport Fish

FRANK MURKOWSKI, GOVERNOR

333 Raspberry Road
Anchorage, AK 99518-1599
PHONE: (907) 267-2326
FAX: (907) 267-2464

Date January 27, 2006

To: Robin Willis

From : Jason Graham

Re: Access for Anchor, Montana, and Salcha Creeks

Anchor River

Accessible: 16723 feet

Non-Accessible: 4542 feet

Montana Creek

Accessible: 29063 feet

Non-Accessible: 17468 feet

Salcha Creek

Accessible: 16181 feet

Non-Accessible: 16134 feet

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME

DIVISION OF SPORT FISH

FRANK H. MURKOWSKI, GOVERNOR

333 Raspberry Road
Anchorage, AK 99518-1599
PHONE: (907) 267-2342
FAX: (907) 267-2464

MEMORANDUM

TO: Robin Willis, Tina Cunning

FROM: Joe Giefer
Habitat Biologist

DATE: January 23, 2006

SUBJECT: Montana Creek To-and-Along Easements

Location depicted on map: Montana Creek, USGS Quad TALKEETNA A-1 and TALKEETNA MOUNTAINS A-6, described as secs. 5, 7, and 8, T. 23 N., R.4 W., W.M., and secs. 11, 14, 15, 21, 22, 28, 32, and 33, T. 24 N., R. 4 W., Seward Meridian, Alaska.

The following distances are approximations based on the maps ADF&G has produced, they do not reflect distance's based on Federal, State, or Borough surveys or plats. On the lower reaches of Montana creek, there is approximately 29,063 feet of accessible shoreline and approximately 17,468 feet of non-accessible shoreline.

The private property depicted on the map without To & Along easements are older conveyances from the Federal Government directly to individual private citizens. As far as we know, these parcels are not subject to a To & Along reservation. In an effort to err on the side of caution, if it's not clear that there is access along the shoreline, ADF&G has assumed that there is not and has depicted it as such on our map. It is possible that some areas depicted as not having access do actually in fact have access, and this could be for a variety of reasons that cant be clarified until further research is done, particularly having some time spent on the ground looking at these areas on a site specific basis.

In secs. 11, 14, 15, 21, and 22, of T. 24 N., R. 4 W., both banks of Montana Creek are subject to a To & Along easement. Secs. 28, 32, and 33 of T. 24 N., R. 4 W., are composed of private parcels not subject to a To & Along reservation.

In T. 23 N., R. 4 W., both banks of Montana creek are subject to easements thru a small reach of State owned land in the N/E corner of sec. 5. In the S/W corner of sec. 5, the creek is subject to a To & Along on river-left, thru the extreme N/W corner of sec. 8, and on into sec. 7 where both banks are subject to a easement for a short distance, then again there is only a easement on river-left downriver to where Montana Creek flows into the Susitna River.

STATE OF ALASKA

FRANK H. MURKOWSKI, GOVERNOR

DEPARTMENT OF FISH AND GAME

DIVISION OF SPORT FISH

333 Raspberry Road
Anchorage, AK 99518-1599
PHONE: (907) 267-2342
FAX: (907) 267-2464

MEMORANDUM

TO: Robin Willis, Tina Cunning

FROM: Joe Giefer
Habitat Biologist

DATE: January 27, 2006

SUBJECT: Salcha River To-and-Along Easements

The location depicted on map is the Salcha River, USGS Quad BIG DELTA B-6, sections 21 and 22, T. 5 S., R.4 E., Fairbanks Meridian, Alaska.

In this particular stretch of the Salcha, the current path of the river is an approximation at best, there is no current aerial photography or surveyed hydrography to use as a reference when comparing the river corridor to the adjacent uplands. The private properties depicted on the map without "To & Along" easements are generally older conveyances from the Federal Government directly to individual private citizens. As far as we know, these parcels are not subject to a "To & Along" reservation. In an effort to err on the side of caution, if it is not clear that there is access along the shoreline, ADF&G has assumed that there is not access and has depicted it as such on our map. It is possible that some areas depicted as not having access do actually have access, and this could be for a variety of reasons that can not be clarified until further research is done, particularly by spending some time on the ground looking at these areas on a site specific basis.

The following distances are approximations based on the maps ADF&G has produced, they do not reflect distances based on Federal, State, or Borough surveys or plats. On the reaches depicted in the maps of the Salcha River, there is approximately 16,181 feet of accessible shoreline and approximately 16,134 feet of non-accessible shoreline. .

In sec. 22, there is a small tract of State owned land on both banks of the Salcha where the Richarson Highway crosses the river. These state owned tracts are subject to easements. There is also a boat launch on these same state owned tracts.

In sec. 21, all the privately held land adjacent to the Salcha is subject to a To & Along easement. The west half of the northwest corner of sec. 21 is state owned land, immediately to the west of this tract is the confluence of the Tanana and the Salcha rivers.

STATE OF ALASKA

FRANK H. MURKOWSKI, GOVERNOR

DEPARTMENT OF FISH AND GAME

DIVISION OF SPORT FISH

333 Raspberry Road
Anchorage, AK 99518-1599
PHONE: (907) 267-2342
FAX: (907) 267-2464

MEMORANDUM

TO: Robin Willis, Tina Cunning

FROM: Joe Giefer
Habitat Biologist

DATE: January 27, 2006

SUBJECT: Anchor River "To-and-Along" Easements (AS 38.05.127)

The location depicted on map is the Anchor River, from the Sterling Highway downstream to the mouth of the river. This area can be found on USGS quad Seldovia D-5, section 33 of T. 4 S., R. 15 W., and sections 5, 4, 3, 10, 11, of T. 5 S., R. 15 W., Seward Meridian, Alaska

The following distances are approximations based on the maps ADF&G has produced, they do not reflect distances based on Federal, State, or Borough surveys or plats. On the reaches depicted on the map of the Anchor River, there is approximately 16,723 feet of accessible shoreline and approximately 4,542 feet of non-accessible shoreline.

Mapping the Anchor River in this area is particularly problematic given its tendency to move and meander over time as it nears the coast. The river channel we are using as a template is from year 2000 satellite imagery that we digitized and placed over the parcel boundary information. The private properties depicted on the map without "To & Along" easements are generally older conveyances from the Federal Government directly to individual private citizens. As far as we know, these parcels are not subject to a "To & Along" reservation. In an effort to err on the side of caution, if it is not clear that there is access along the shoreline, ADF&G has assumed that there is not access and has depicted it as such on our map. It is possible that some areas depicted as not having access do actually have access, and this could be for a variety of reasons that can not be clarified until further research is done, particularly by spending some time on the ground looking at these areas on a site specific basis.

In section 33, T. 4 S., R.15 W., from the mouth of the river upstream to section 5, T. 5 S., R. 15 W., there is a small peninsula shaped parcel on river-left subject to an easement, however it is not continuous upstream into the adjoining southern section. In this area there appears to be no "To & Along" on a short stretch of uplands on river-left, and approximately the last ½ mile of shoreline of river-right at the mouth. Continuing upstream, where the river flows through state land in sec. 5, T. 5

S., R. 15 W., and continues east across sec. 4 of the same township/range both banks of the Anchor River are subject to an along easement, this is mostly state lands and access is assumed. The remaining area where access appears limited is a short distance from the highway downstream to where the river enters State land.

As you continue upstream where the river enters sections 10, 11, and into 14 of T. 5 S., R. 15 W., which is not depicted on map, uplands on river-right were conveyed from the United States to the Mental Health Trust. Lands on river-left were conveyed to the University and a small parcel has become part of the Mental Health Trust. The University and Mental Health Trust Lands have been inconsistently subject to provisions of Title 38 so shoreline access is unclear along these stretches of river.

ALASKA FLY FISHERS

Winners of the 1994 McKenzie Cup

February 21, 2011

Representative Les Gara
State Capitol, Room 500
Juneau, AK 99801

Reference: HB 144

Dear Representative Gara:

The Alaska Fly Fishers is a membership organization representing approximately 400 individuals interested in Fly Fishing conservation and education for the state of Alaska.

Alaska Fly Fishers supports enhancing and maintaining access to fishing streams. We support HB 144 as its intent is to enhance and maintain access to fishing streams by having the Department of Natural Resources report annually on their efforts in regards to stream access.

Access to fishing streams is an important part of the sport of fishing. Considering the importance of gathering fish and sport fishing to the residents of Alaska, this bill shines a bright light on enhancing and maintaining the critical component of stream access.

Thank you for your efforts to enhance and maintain access to Alaska's fishing steams.

Best regards,

ALAKSA FLY FISHERS

Mark Huber
President

cc: Alaska Fly Fishers Board of Directors



February 9, 2011

Representative Les Gara
State Capitol
Juneau, AK 99801

Re: HB144

Dear Representative Gara:

The Kenai River Sportfishing Association (KRSA) supports the legislative objective of House Bill 144, an act requiring the Alaska Department of Natural Resources, in conjunction with the Alaska Department of Fish and Game, to annually deliver to the legislature and the governor a report on fishing stream access.

Alaska is home to some of the best sportfishing, personal use and subsistence opportunities in the world. HB144 provides the Legislature with a reporting mechanism to ensure monitoring of public access to important fishing streams in the state. Protecting and enhancing public access to the hunting, fishing and recreational uses along the state's waterways is of primary importance to many people and a wide variety of user groups.

KRSA is a non-profit 501 (c) 3 conservation organization dedicated to ensuring the sustainability of the greatest sportfishing river in the world – the Kenai. Our goals are to conserve and rehabilitate fisheries habitat, promote predictable and meaningful sportfishing opportunity, encourage and foster fisheries research and provide public aquatic education. Over the past fifteen years we have raised and invested over $10 million towards these goals.

We appreciate your efforts and those of your colleagues in regards to HB144.

Respectfully,

Ricky Gease

Ricky Gease
Executive Director

WOMEN'S FLYFISHING
PO Box 243963
Anchorage, AK 99524-3963

February 17, 2011

Representative Les Gara
State Capitol 500
Juneau, AK 99801

Dear Representative Gara:

I'm writing you today in support of HB 144, which would direct the Department of Natural Resources to report annually to the legislature on its efforts to maintain or enhance access to and along fishing streams as well as its objectives for enhancing and maintaining access to and along fishing streams by the public in the upcoming year.

As the owner of a licensed fly fishing guide service in Alaska, I believe that the Department of Natural Resources should play an active role in assisting the public to have access, wherever possible, to a wide variety of fishing opportunities. The bill would put in place a mechanism for voluntary land exchanges (or purchases) between the State and private owners along important recreational rivers. This would help us avoid the purchases of such lands for development, thus denying the public's use of them. Other efforts could involve working with riparian land owners to identify sections of bank access that could be utilized by the public either free or through a paid access corridor would certainly be worthwhile to pursue as well. "Enhancing access to fishing streams," might also mean identifying areas where people are trespassing on either public or private land to get access to various waterways, which would also provide valuable information on where the Department should direct efforts in opening or developing fishing opportunities to the public.

I would urge members of the House Fisheries Committee to support HB 144.

Sincerely,

Cecilia "Pudge" Kleinkauf

Representative Les Gara
ATTN: Mindy O'Neall
State Capitol Building, Ste 500
Juneau, AK 99801

SUBJECT: Support for HB144

Dear Representative Gara,

I strongly support passage of HB144. This is legislation that is long overdue and I want to thank you for your efforts over the years to get this important piece of legislation passed.

Public access to our public waters is an important issue that many who use this resource take for granted until lost. I spent many years as a member and chair of a local fish and game advisory committee and attended many Board of Fisheries and Board of Game meetings. During this time access issues come up several times in submitted proposals and public testimony. Lost access was always a very contentious issue and was one that should have been foreseen prior to becoming an issue.

You legislation is sorely needed to help prevent these problems from occurring and I ask the Alaska State Legislature to pass this important legislation, HB144, during this session.

Sincerely,

Willard E Stockwell
PO Box 721
Cooper Landing, AK 99572

3415 Wentworth St.
Anchorage AK 99508

February 19, 2011

Dear Representative Gara:

I support increasing the amount and quality of publicly accessible land for fishing. The area's which are now publicly accessible are often overcrowded which leads to conflict between users, reduces the quality of the experience and results in the degradation of the land. For example, in the mid 1980's the Kenai River when the runs of salmon were heavy was crowded in the area of the old Sportsman Lodge and ferry crossing. However, a short walk either up or down stream would result in far fewer anglers. Now, during the same time periods, the river is often crowded on nearly every available space between the Kenai Lake and Jim's Landing for between June and September. This isn't isolated to this fishery.

If we were systematically to review opportunities to acquire land which has a high value for fishing through a process that insures land owners rights are not violated, it would both improve the access for Alaskans and the quality of their lives. I believe HB 144 would do that.

I have been involved as a volunteer in a number of aspects of resources in Alaska. I served for over 10 years on the Anchorage Fish & Game Advisory Committee, approximately 5 years on the Southcentral Regional Advisory Council for Subsistence, and one term on the Board of Game. During that time access for the average Alaskan was a consistent issue. I am currently a member of the Alaska Fly Fishers and have served numerous terms as an officer of that organization. Again, AFF members have made many contributions to habitat restoration and to enhance our public fisheries. We often hear about the lack of access to fisheries which they can reach within a reasonable distance of their homes.

Based on my experience, the Alaska Department of Fish and Game does a very good job of maintaining and enhancing our fisheries. However with a growing population in Alaska, it becomes critical to do what we can to increase the amount of public lands available. We, as a state, have an obligation under Article 8 of our constitution to make the resources of Alaska available for the maximum use consistent with the public interest. Further the legislature has an obligation to make these resources reserved for to the people for common use.

HB 144, in my opinion, would be consistent with and assist in meeting this obligation.

Sincerely,

Bob Churchill

ALASKA STATE LEGISLATURE

REPRESENTATIVE LES GARA

MEMORANDUM

TO: Representative Steve Thompson

FROM: Representative Les Gara

DATE: February 8, 2011

RE: Hearing Request for HB 144, Reporting on Fishing Stream Access

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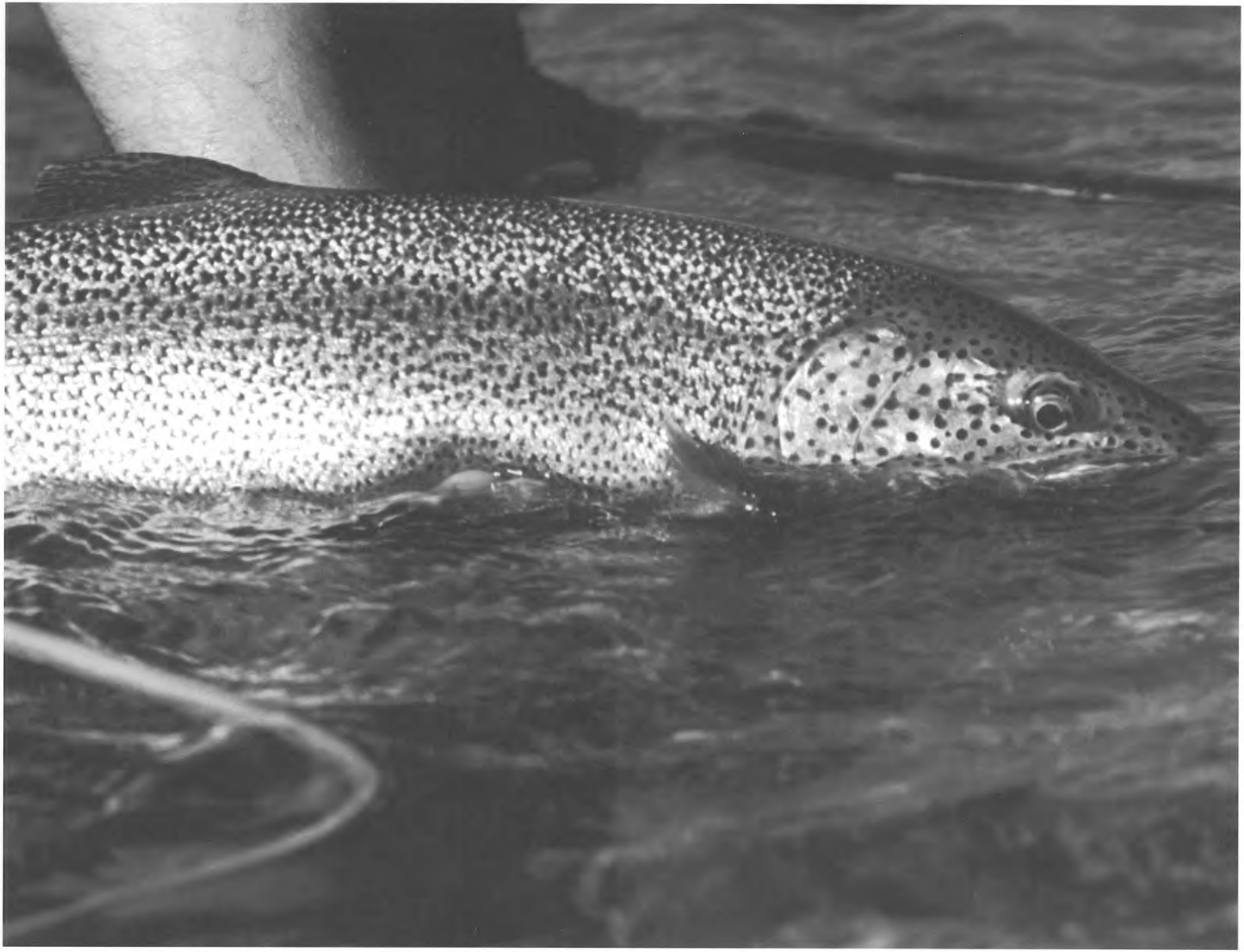
I respectfully request that House Bill 144, relating to fishing stream access reports, be scheduled for a hearing in the House Special Committee on Fisheries. Please feel free to contact me, or my aide Mindy O'Neall, with questions or thoughts at 465-2647.

Attached you will find the contents requested by the committee. This includes the current version of the bill, a sponsor statement, sectional analysis, and additional documentation relating to the bill.

Thank you for your consideration.

Rep. Les Gara

January-May: State Capitol • Juneau, AK 99801-1182 • (907) 465-2647 • Fax (907) 465-3518
June-December: 716 W. 4th Avenue • Anchorage, AK 99501• (907) 269-0106• Fax (907) 269-0109
Representative_Les_Gara@legis.state.ak.us



HB 173

<TARGET><BILL>HB 173</BILL><SUBJECT>HB 173</SUBJECT><COMM>HFSH27</COMM></TARGET>

ALASKA STATE HOUSE OF REPRESENTATIVES

Representative Steve Thompson, Chair
Alaska State Capitol Room 428
Juneau, Alaska 99801
Phone: 907-465-3004
Fax: 907-465-2070

Meeting Schedule
Days: Tuesday & Thursday
Time: 5 to 7pm
Location: Capitol Room 120
Email: House_Fisheries@legis.state.ak.us

House Special Committee on Fisheries

SPONSOR STATEMENT FOR HOUSE BILL 173

"An Act amending the termination date of the licensing of sport fishing operators and sport fishing guides; and providing for an effective date."

House Bill 173 will ensure the continuation of Alaska's sport fish guide licensing and reporting program. Legislation authorizing the program was passed in 2004 and the program has proven beneficial to both the sport fishing industry and resource managers. With more than 1.8 million clients, 88% of whom are nonresidents, taking more than 460,000 guided fishing trips in Alaska annually, guided sport fishing has become an integral part of Alaska's tourism economy. In fact, a study commissioned by the Alaska Department of Fish and Game estimated that nonresident spending on sport fishing was more than $650 million in 2007.

Since the program's inception, an average of 1,670 sport fishing business licenses and 1,981 sport fishing guide licenses have been sold annually. 90% of license holders are Alaska residents and the professionalization of the sport fishing guide industry has benefitted both the industry and the resource. The data collected through the program provides information state and federal managers need to sustainably manage sport fish populations. The program also allows Alaska to receive an exemption from the National Saltwater Angler Registry; a federal program that would begin levying fees for registration in 2011.

Recognizing the importance of the program, the Alaska legislature extended the program's termination date for one year in 2010. HB 173 proposes to similarly amend the program's statutory termination language to allow this valuable program to continue serving Alaskans and their valuable fishery resources.

FISCAL NOTE

STATE OF ALASKA
2011 LEGISLATIVE SESSION

Fiscal Note Number
Bill Version **HB 173 \A**
() Publish Date

Identifier: HB173-DFG-SFD-02-28-11
Title Sport Fishing Guiding Services
Dept. Affected ADF&G
Appropriation Sport Fisheries
Allocation Sport Fisheries
Sponsor House Fisheries Committee
Requester House Fisheries Committee
OMB Component Number 464

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information					
OPERATING EXPENDITURES	**FY 2012**	**FY 2012**	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**
Personal Services		290.0	290.0				
Travel		10.0	10.0				
Services		90.0	90.0				
Commodities		10.0	10.0				
Capital Outlay							
Grants							
Miscellaneous							
TOTAL OPERATING	**0.0**	**400.0**	**400.0**				
CAPITAL EXPENDITURES							
CHANGE IN REVENUES							

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts							
1003 GF Match							
1004 GF							
1005 GF/Program Receipts							
1037 GF/Mental Health							
1024 Fish & Game Fund		400.0	400.0				
TOTAL	**0.0**	**400.0**	**400.0**				

Estimate of any current year (FY2011) cost

POSITIONS

Full-time	**0.0**	**0.0**	**0.0**				
Part-time	0.0	0.0	0.0				
Temporary	0.0	0.0	0.0				

Why this fiscal note differs from previous version (if initial version, please note as such)

Initial version.

Prepared by Charles O. Swanton, Director
Division Sport Fisheries
Approved by Kevin Brooks, Administrative Services Director
Department of Fish and Game

Phone 907-465-6184
Date/Time 02/28/2011 1:23PM
Date 3/3/2011

(Revised 1/27/2011 OMB)

FISCAL NOTE

STATE OF ALASKA
2011 LEGISLATIVE SESSION

BILL NO. HB 173 \A

Analysis

This bill extends the termination date of the licensing program for sport fishing guides and sport fishing operators from January 1, 2012 to January 1, 2013. The division has budgeted $400.0 in the FY12 Governor's budget to administer the Sport Fish operator/guide/vessel program. The program generates average Fish & Game Fund revenues of $240.2, with the balance of program expenditures funded with Sport Fishing license sale revenue.

LAWS OF ALASKA

2004

Source
SCS CSHB 452(RES)

Chapter No.
_____

AN ACT

Relating to licensing and regulation of sport fishing operators and sport fishing guides; relating to licensing and registration of sport fishing vessels; authorizing the Department of Fish and Game and the Alaska Commercial Fisheries Entry Commission to release records and reports to the Department of Natural Resources and the Department of Public Safety; and providing for an effective date.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

THE ACT FOLLOWS ON PAGE 1

AN ACT

Relating to licensing and regulation of sport fishing operators and sport fishing guides; relating to licensing and registration of sport fishing vessels; authorizing the Department of Fish and Game and the Alaska Commercial Fisheries Entry Commission to release records and reports to the Department of Natural Resources and the Department of Public Safety; and providing for an effective date.

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* **Section 1.** AS 16.05.340(a) is amended by adding a new paragraph to read:

(26) Fishing services licenses

(A) Sport fishing operator license $100

(B) Sport fishing guide license 50

(C) Sport fishing operator and sport fishing guide combined license 100

* **Sec. 2.** AS 16.05 is amended by adding a new section to read:

Sec. 16.05.395. Sport fishing vessel registration. For calendar year 2005 and subsequent calendar years, a person may not use a vessel to provide sport fishing services under AS 16.40.260 - 16.40.299 unless the vessel is registered with the department and proof of registration is attached to and clearly visible on the vessel while the vessel is used to provide sport fishing services. The department shall register vessels used to provide sport fishing services, and provide proof of registration, without charge. The department may adopt regulations as the department finds necessary to implement this section.

*** Sec. 3.** AS 16.05.420 is amended to read:

Sec. 16.05.420. License, tag, [AND] permit, and registration violations. (a) A false statement of a material fact in an application for a license, tag, [OR] permit, **and sport fishing vessel registration** issued under AS 16.05.330 - 16.05.430 voids the license, tag, [OR] permit, **or registration** for which the application is made.

(b) A person may not make a false statement, or omit a material fact, in an application for a license, tag, [OR] permit, **or sport fishing vessel registration** issued under AS 16.05.330 - 16.05.430. A person who without any culpable mental state makes a false statement as to the person's identity or residency in an application for a license, tag, [OR] permit, **or sport fishing vessel registration** issued under AS 16.05.330 - 16.05.430 is guilty of a violation and upon conviction is punishable by a fine of not more than $300. A person who knowingly violates this subsection is guilty of a class A misdemeanor.

(c) A person to whom a license, [OR] tag, **or sport fishing vessel registration** has been issued under this chapter may not alter, change, loan, or transfer the license, [OR] tag, **or sport fishing vessel registration**. A person may not use a license, [OR] tag, **or sport fishing vessel registration** that has been issued under this chapter to another person.

*** Sec. 4.** AS 16.05.490(a) is amended to read:

(a) As a condition to delivery or landing of fish or engaging in commercial fishing in the state, a license is required for a commercial vessel [, INCLUDING A VESSEL USED IN CHARTER SERVICE FOR THE RECREATIONAL TAKING OF FISH AND SHELLFISH].

* **Sec. 5.** AS 16.05.815(a) is amended to read:

(a) Except as provided in (b) and (c) of this section, records required by regulations of the department concerning the landings of fish, shellfish, or fishery products, and annual statistical reports of fishermen, buyers, and processors required by regulation of the department are confidential and may not be released by the department or by the Alaska Commercial Fisheries Entry Commission except as set out in this subsection. The department may release the records and reports set out in this subsection to the Alaska Commercial Fisheries Entry Commission. The department and the Alaska Commercial Fisheries Entry Commission may release the records and reports set out in this subsection to the recipients identified in this subsection if the recipient, other than a recipient under (5) - (9) of this subsection, agrees to maintain the confidentiality of the records and reports. The department and the Alaska Commercial Fisheries Entry Commission may release

(1) any of the records and reports to the National Marine Fisheries Service and the professional staff of the North Pacific Fishery Management Council as required for preparation and implementation of the fishery management plans of the North Pacific Fishery Management Council within the exclusive economic zone;

(2) any of the records and reports to the professional staff of the Pacific States Marine Fisheries Commission who are employed in the Alaska Fisheries Information Network project for the purpose of exchanging information with users authorized by the department;

(3) any of the records and reports to the Department of Revenue to assist the **department** [DEPARTMENT OF REVENUE] in carrying out its statutory responsibilities;

(4) records or reports of the total value purchased by each buyer to a municipality that levies and collects a tax on fish, shellfish, or fishery products if the municipality requires records of the landings of fish, shellfish, or fishery products to be submitted to it for purposes of verification of taxes payable;

(5) such records and reports as necessary to be in conformity with a court order;

(6) on request, the report of a person to the person whose fishing

activity is the subject of the report, or to a designee of the person whose fishing activity is the subject of the report;

(7) on request, annual statistical reports of a fisherman, buyer, or processor to the fisherman, buyer, or processor whose activity is the subject of the report, or to a designee of the fisherman, buyer, or processor whose activity is the subject of the report;

(8) **any of the records and reports** [FISH TICKETS, FISH TICKET INFORMATION, SALTWATER CHARTER LOGBOOKS, SALTWATER CHARTER LOGBOOK INFORMATION, AND ANNUAL STATISTICAL REPORTS OF FISHERMEN, BUYERS, AND PROCESSORS AND INFORMATION IN THOSE REPORTS] to the Department of Public Safety **for law enforcement purposes**;

(9) fish tickets, fish ticket information, and annual statistical reports of fishermen, buyers, and processors and information in those reports to the law enforcement personnel of the National Marine Fisheries Service and the National Oceanic and Atmospheric Administration for the purpose of enforcing fishery laws in waters of this state and in waters of the exclusive economic zone adjacent to this state;

(10) fish tickets and fish ticket information regarding halibut to the International Pacific Halibut Commission; [AND]

(11) any of the records and reports to the child support enforcement agency created in AS 25.27.010, or the child support enforcement agency of another state, for child support purposes authorized under law**; and**

(12) any of the records and reports to the Department of Natural Resources to assist the department in carrying out its statutory responsibilities in regard to sport fishing operations and sport fishing guides within the Kenai River Special Management Area under AS 41.21.500 - 41.21.514.

*** Sec. 6.** AS 16.40 is amended by adding new sections to read:

Article 6. Sport Fishing Services.

Sec. 16.40.260. Sport fishing operator license. (a) The department shall issue an annual sport fishing operator license to a person who

(1) holds a current business license under AS 43.70 to provide services

to sport fishermen;

(2) presents proof satisfactory to the department of a general liability insurance policy or marine protection and indemnity insurance policy, covering the services provided by the person and the person's employees to sport fishermen, that provides coverage of at least $100,000 for each incident, and $300,000 for all incidents in a year;

(3) pays the license fee prescribed by AS 16.05.340(a); and

(4) satisfies all additional requirements adopted in regulation by the Board of Fisheries.

(b) A person may not provide sport fishing services unless the person holds a current sport fishing operator license and has current insurance coverage as required in (a)(2) of this section.

(c) A person who holds a current sport fishing operator license may contract to provide sport fishing guide services to a sport fisherman through an employee who holds a current sport fishing guide license under AS 16.40.270.

(d) A person who holds a current sport fishing operator license may not directly provide sport fishing guide services to a sport fisherman unless the person also holds a current sport fishing guide license under AS 16.40.270(b).

(e) A person who holds a sport fishing operator license may not aid in the commission of a violation of AS 16.05 - AS 16.40 or a regulation adopted under AS 16.05 - AS 16.40, including regulations relating to the proper method to release fish, by a sport fishing guide who is employed by the person or by a sport fisherman who is a client of the person.

Sec. 16.40.270. Sport fishing guide license. (a) A natural person may obtain an annual sport fishing guide license if the person

(1) is a citizen of the United States, Canada, or Mexico, or is a resident alien;

(2) is certified in first aid by the American Red Cross or a similar organization;

(3) holds a license to carry passengers for hire issued by the United States Coast Guard if the person operates a vessel in the provision of sport fishing

guide services and the license is required by the United States Coast Guard for the area in which the fishing guide provides fishing guide services;

(4) holds a current sport fishing license from this state;

(5) pays the license fee prescribed by AS 16.05.340(a); and

(6) satisfies all additional requirements adopted in regulation by the Board of Fisheries.

(b) A natural person may obtain an annual sport fishing operator and sport fishing guide combined license if the person satisfies the requirements for a sport fishing operator license under AS 16.40.260 and for a sport fishing guide license under this section and pays the license fee prescribed by AS 16.05.340(a).

(c) A person may not provide sport fishing guide services unless the person

(1) holds a current sport fishing guide license; and

(2) holds a current sport fishing operator license or is an employee of a person who holds a current sport fishing operator license.

(d) A sport fishing guide may provide sport fishing guide services only to persons who have engaged the services of the sport fishing operator by whom the sport fishing guide is employed. A sport fishing guide may not contract directly with a person to provide sport fishing guide services to a person unless the sport fishing guide also holds a current sport fishing operator license.

(e) While engaged in providing sport fishing guide services, a sport fishing guide shall have readily available for inspection

(1) a current sport fishing guide license;

(2) the current licenses, tags, and permits that are required to engage in the sport fishery for which the sport fishing guide services are being provided;

(3) a driver's license or similar identification card that is issued by a state or federal agency and that bears a photograph of the fishing guide; and

(4) proof of

(A) employment as a sport fishing guide by a person who holds a current sport fishing operator license; or

(B) current licensure as a sport fishing operator.

(f) A sport fishing guide may not

(1) aid in the commission of a violation of AS 16.05 - AS 16.40 or a regulation adopted under AS 16.05 - AS 16.40 by a client of the sport fishing guide; or

(2) permit the commission by a client of the sport fishing guide of a violation of AS 16.05 - AS 16.40 or a regulation adopted under AS 16.05 - AS 16.40 that the sport fishing guide knows or reasonably believes is being or will be committed without

(A) attempting to prevent it, short of using force; and

(B) reporting the violation.

Sec. 16.40.280. Reports. (a) The department may collect information from sport fishing guides, including

(1) the name and license number of each vessel licensed under AS 16.05.490 that is used in providing sport fishing guide services;

(2) the amount of fishing effort, catch, and harvest by clients of a sport fishing guide;

(3) the locations fished during the provision of sport fishing guide services; and

(4) other information that the department or board requires by regulation.

(b) A person who holds a license issued under AS 16.40.260 or 16.40.270 shall comply with the reporting requirements in this section and reporting requirements adopted in regulation by the department or board. The department and the board may adopt by regulation requirements for timely submission of reports required under this section or under regulations adopted by the department or board.

(c) A person who is required to complete reports under this section may not provide false information or omit material facts in a report.

(d) A person who is required to complete reports under this section may not be issued a new license under AS 16.40.260 or 16.40.270 unless the department has received all reports required under this section for the preceding year.

(e) Information collected under this section is confidential to the extent provided under AS 16.05.815.

(f) The department or board may adopt regulations under AS 44.62

(Administrative Procedure Act) that it considers necessary to implement this section.

Sec. 16.40.290. Penalty. (a) Except as provided in (b) and (c) of this section, a person who knowingly violates AS 16.40.260 - 16.40.299 or a regulation adopted under AS 16.40.260 - 16.40.299 is guilty of a class A misdemeanor.

(b) A person who, without any culpable mental state, violates AS 16.40.270(e) is guilty of a violation.

(c) A person who knowingly violates AS 16.40.270(e) or who knowingly fails to comply with a requirement for timely submission of reports required by a regulation adopted under AS 16.40.280(b) is, for a

(1) first offense in a three-year period, guilty of a violation; and

(2) second or subsequent offense in a three-year period, guilty of a class B misdemeanor.

(d) In addition to any other penalty provided by law, a court may revoke the sport fishing guide license of a person who is convicted under (a) or (c)(2) of this section.

(e) In this section, "knowingly" has the meaning given in AS 11.81.900.

Sec. 16.40.299. Definitions. In AS 16.40.260 - 16.40.299,

(1) "sport fishing guide" means a person who is licensed to provide sport fishing guide services to persons who are engaged in sport fishing;

(2) "sport fishing guide services" means assistance, for compensation or with the intent to receive compensation, to a sport fisherman to take or to attempt to take fish by accompanying or physically directing the sport fisherman in sport fishing activities during any part of a sport fishing trip; "sport fishing guide services" does not include

(A) sport fishing services; or

(B) services provided by an assistant, deckhand, or similar person who works directly under the supervision of and on the same vessel as a sport fishing guide;

(3) "sport fishing services" means the indirect provision of assistance, for compensation or with the intent to receive compensation, to a person engaged in sport fishing in taking or attempting to take fish or shellfish by a business that

employs a sport fishing guide to provide sport fishing guide services to the person during any portion of a sport fishing trip; "sport fishing services" does not include

(A) an activity for which a sport fishing guide license is required; or

(B) booking and other ancillary services provided by a tour broker or agent to a sport fishing services operator.

* **Sec. 7.** AS 25.27.244(s)(2)(A) is amended by adding new sub-subparagraphs to read:

(xviii) sport fishing operator license under AS 16.40.260;

(xix) sport fishing guide license under AS 16.40.270;

* **Sec. 8.** AS 16.05.340(a)(26); AS 16.40.260, 16.40.270, 16.40.280, 16.40.290, 16.40.299; AS 25.27.244(s)(2)(A)(xviii), and 25.27.244(s)(2)(A)(xix) are repealed January 1, 2010.

* **Sec. 9.** The uncodified law of the State of Alaska is amended by adding a new section to read:

TRANSITION; REGULATIONS. The Board of Fisheries and the Department of Fish and Game each may proceed to adopt regulations necessary to implement the changes made by secs. 1, 3, 4, 5, and 6 of this Act. The regulations take effect under AS 44.62 (Administrative Procedure Act), but not before the effective date of the statutory changes.

* **Sec. 10.** Sections 2 and 9 of this Act take effect immediately under AS 01.10.070(c).

* **Sec. 11.** Except as provided in sec. 10 of this Act, this Act takes effect January 1, 2005.

LAWS OF ALASKA

2010

Source
HCS CSSB 294(FIN)

Chapter No.
_____

AN ACT

Amending the termination date of the licensing of sport fishing operators and sport fishing guides; and providing for an effective date.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

THE ACT FOLLOWS ON PAGE 1

AN ACT

Amending the termination date of the licensing of sport fishing operators and sport fishing guides; and providing for an effective date.

*** Section 1.** Section 8, ch. 70, SLA 2004, as amended by sec. 3, ch. 61, SLA 2009, is amended to read:

Sec. 8. AS 16.05.340(a)(26); AS 16.40.260, 16.40.270, 16.40.280, 16.40.290, 16.40.299; AS 25.27.244(s)(2)(A)(xviii), and 25.27.244(s)(2)(A)(xix) are repealed January 1, **2012** [2011].

*** Sec. 2.** This Act takes effect immediately under AS 01.10.070(c).

Brief for HB 173: SPORT FISH GUIDE LICENSES
(Reauthorization of Program)
March 3, 2011

Alaska Department of Fish and Game Contacts:
Charlie Swanton- Charles.Swanton@alaska.gov; phone: 465-6184 or 321-0955
Ben Mulligan - Ben.Mulligan@alaska.gov; phone: 465-6137 or 321-5797.

Background:

- Original legislation passed in May, 2004; effective January 1, 2005; with 1 year extensions in 2009 and 2010.

- Proposed by the Department for three main reasons:
  1. Information on guide numbers and their fishing activities was either not available or limited in many parts of the state;
  2. Establish minimum standards to operate a business or contract as a guide (safety, liability insurance, US Coast Guard license, etc.) as a means to increase professionalism and reduce speculative entry; and
  3. Provide comprehensive and credible data on guided sport fishing activities to regulatory agencies: Alaska Board of Fisheries (BOF), International Pacific Halibut Commission (IPHC), and North Pacific Fisheries Management Council (NPFMC).

Legislation:

Sec.16.40.260 Sport fishing operator license;
Sec.16.40.270 Sport fishing guide license;
Sec.16.40.280 Reports;
Sec.16.40.290 Penalties for violations.

These legislative sections include licensing provisions and fees (AS. 16.05.340(a)) for sport fishing business owners ($100), sport fishing guides working for the business ($50), and business owners who are also a guide (owner/operator combo $100). The mandatory reporting requirements, logbooks, are for both fresh and saltwater guide activities (freshwater logbooks were instituted in 2005). The penalties for sport fish guiding violations by business owners and guides include possible revocation of their license.

Companion Regulations:

5 AAC 75.075 Sport fishing services and sport fishing guide services; license requirements; regulation of activities.

5 AAC 75.076. Sport fishing services and sport fishing guides reporting requirements.

5 AAC 75.077. Sport fishing guide vessel registration requirements.

Present Benefits and Utility:

- A comprehensive list of all sport fishing guides working in salt water is part of the data requirements that allowed Alaska to receive an exemption from participating in the National Saltwater Angler Registry (up to $25/saltwater angler in 2011).

- The logbook data for saltwater anglers has been used extensively within the IPHC and NPFMC for analyzing regulatory options and inform decisions on Pacific Halibut.

- Both freshwater and saltwater logbook harvest data has been presented and utilized by the Alaska Board of Fisheries. Harvest estimate verification studies were conducted and found to be of moderate scientific quality (statistical precision was highly acceptable) compared to statewide sport fish harvest survey, and dock side creel programs.

Participation Statistics:

- An average of **1,602 sport fishing business licenses** (including owner/operator combo) have been sold (2006-2010); 88% of owners are Alaskan residents.

- An average of **1,853 sport fishing guide licenses** have been sold (2007-2010); 72% of guides are Alaskan residents.

- Based on logbook data, over **2.1 million clients took 536,960 guided fishing trips** (from 2005 through 2009); 67% of clients fished in saltwater, 33% fished in freshwater and 88% of all clients were nonresidents. The 2010 data is still being finalized.

- An average of **1,334 vessels in saltwater** were used for guided fishing trips (2005-2009).

Electronic Reporting (Modernization initiative):

- Modernization and timely reporting of recreational harvest data are a priority. We are actively working on this task:

    - In July, 2009 we developed a scannable saltwater logbook form which will reduce the time lag when logbook data is available from 2 to 3 months to 1 to 2 weeks. This new form was employed for saltwater forms statewide in 2010. Ten public meetings were held across the state to explain this new format and received nearly unanimous support from user groups and public. Freshwater logbooks will be converted to scannable format in 2012.

    - The point of sale hunting and fishing licensing program is still being sought and technical challenges addressed.

Brief for SB 294: SPORT FISH GUIDE LICENSES (Reauthorization of Program/Repeal of Sunset) March 10, 2010

Alaska Department of Fish and Game Contacts:
Charlie Swanton- Charles.Swanton@alaska.gov; phone: 465-6184 or 321-0955
Jennifer Yuhas - Jennifer.Yuhas@alaska.gov; phone: 465-6137 or 388-7951.

Background:

- Original legislation passed in May, 2004; effective January 1, 2005.

- Proposed by the Department for three main reasons:
  1. Information on guide numbers and their fishing activities was either not available or limited in many parts of the state;
  2. Establish minimum standards to operate a business or contract as a guide (safety, liability insurance, US Coast Guard license, etc.) as a means to increase professionalism and reduce speculative entry; and
  3. Provide comprehensive and credible data on guided sport fishing activities to regulatory agencies: Alaska Board of Fisheries (BOF), International Pacific Halibut Commission (IPHC), and North Pacific Fisheries Management Council (NPFMC).

Legislation:

Sec.16.40.260 Sport fishing operator license;
Sec.16.40.270 Sport fishing guide license;
Sec.16.40.280 Reports;
Sec.16.40.290 Penalties for violations.

These legislative sections include licensing provisions and fees (AS. 16.05.340(a)) for sport fishing business owners ($100), sport fishing guides working for the business ($50), and business owners who are also a guide (owner/operator combo $100). The mandatory reporting requirements, logbooks, are for both fresh and saltwater guide activities (freshwater logbooks were instituted in 2005). The penalties for sport fish guiding violations by business owners and guides include possible revocation of their license.

Companion Regulations:

5 AAC 75.075 Sport fishing services and sport fishing guide services; license requirements; regulation of activities.

5 AAC 75.076. Sport fishing services and sport fishing guides reporting requirements.

5 AAC 75.077. Sport fishing guide vessel registration requirements.

Present Benefits and Utility:

- A comprehensive list of all sport fishing guides working in salt water is part of the data requirements that will allow Alaska to receive an exemption from participating in the National Saltwater Angler Registry (up to $25/saltwater angler in 2011).

- The logbook data for saltwater anglers has been used extensively within the IPHC and NPFMC for rule making on Pacific Halibut.

- Both freshwater and saltwater logbook harvest data has been presented and utilized by the Alaska Board of Fisheries. Harvest estimate verification studies are being conducted comparing logbook, statewide sport fish harvest survey, and dock side creel programs.

Participation Statistics:

- An average of **1,647 sport fishing business licenses** (including owner/operator combo) have been sold (2005-2009); 90% of owners are Alaskan residents.

- An average of **1,882 sport fishing guide licenses** have been sold (2005-2009); 73% of guides are Alaskan residents.

- Based on logbook data, over **2.1 million clients took 536,960 guided fishing trips** (from 2005 through 2009); 67% of clients fished in saltwater, 33% fished in freshwater and 88% of all clients were nonresidents.

- An average of **1,334 vessels in saltwater** were used for guided fishing trips (2005-2009).

Electronic Reporting (Modernization initiative):

- One of Commissioner Lloyd's initiatives is modernization and timely reporting of recreational harvest data. We have been actively working on this task:

    - In July, 2009 we developed a scannable saltwater logbook form which will reduce the time lag when logbook data is available from 2 to 3 months to 1 to 2 weeks. This new form will be employed for saltwater forms statewide in 2010. Ten public meetings were held across the state to explain this new format and received nearly unanimous support from user groups and public.

    - In April, 2010 the point of sale hunting and fishing licensing program will be launched at all ADF&G regional offices. This program will be made available to all license vendors shortly thereafter.

    - We will convert the freshwater logbook to a scannable format starting in 2011.

Special Publication No. 09-11

Participation, Effort, and Harvest in the Sport Fish Business/Guide Licensing and Logbook Programs, 2006-2008

by

Dora Sigurdsson

and

Bob Powers

September 2009

Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries

Symbols and Abbreviations

The following symbols and abbreviations, and others approved for the Système International d'Unités (SI), are used without definition in the following reports by the Divisions of Sport Fish and of Commercial Fisheries: Fishery Manuscripts, Fishery Data Series Reports, Fishery Management Reports, and Special Publications. All others, including deviations from definitions listed below, are noted in the text at first mention, as well as in the titles or footnotes of tables, and in figure or figure captions.

Weights and measures (metric)

centimeter	cm
deciliter	dL
gram	g
hectare	ha
kilogram	kg
kilometer	km
liter	L
meter	m
milliliter	mL
millimeter	mm

Weights and measures (English)

cubic feet per second	ft^3/s
foot	ft
gallon	gal
inch	in
mile	mi
nautical mile	nmi
ounce	oz
pound	lb
quart	qt
yard	yd

Time and temperature

day	d
degrees Celsius	°C
degrees Fahrenheit	°F
degrees kelvin	K
hour	h
minute	min
second	s

Physics and chemistry

all atomic symbols	
alternating current	AC
ampere	A
calorie	cal
direct current	DC
hertz	Hz
horsepower	hp
hydrogen ion activity (negative log of)	pH
parts per million	ppm
parts per thousand	ppt, ‰
volts	V
watts	W

General

Alaska Administrative Code	AAC
all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.
all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.
at	@
compass directions:	
east	E
north	N
south	S
west	W
copyright	©
corporate suffixes:	
Company	Co.
Corporation	Corp.
Incorporated	Inc.
Limited	Ltd.
District of Columbia	D.C.
et alii (and others)	et al.
et cetera (and so forth)	etc.
exempli gratia (for example)	e.g.
Federal Information Code	FIC
id est (that is)	i.e.
latitude or longitude	lat. or long.
monetary symbols (U.S.)	$, ¢
months (tables and figures): first three letters	Jan,...,Dec
registered trademark	®
trademark	™
United States (adjective)	U.S.
United States of America (noun)	USA
U.S.C.	United States Code
U.S. state	use two-letter abbreviations (e.g., AK, WA)

Measures (fisheries)

fork length	FL
mideye to fork	MEF
mideye to tail fork	METF
standard length	SL
total length	TL

Mathematics, statistics

all standard mathematical signs, symbols and abbreviations	
alternate hypothesis	H_A
base of natural logarithm	e
catch per unit effort	CPUE
coefficient of variation	CV
common test statistics	(F, t, χ^2, etc.)
confidence interval	CI
correlation coefficient (multiple)	R
correlation coefficient (simple)	r
covariance	cov
degree (angular)	°
degrees of freedom	df
expected value	E
greater than	$>$
greater than or equal to	$\geq$
harvest per unit effort	HPUE
less than	$<$
less than or equal to	$\leq$
logarithm (natural)	ln
logarithm (base 10)	log
logarithm (specify base)	$\log_2$, etc.
minute (angular)	'
not significant	NS
null hypothesis	H_O
percent	%
probability	P
probability of a type I error (rejection of the null hypothesis when true)	α
probability of a type II error (acceptance of the null hypothesis when false)	β
second (angular)	"
standard deviation	SD
standard error	SE
variance	
population	Var
sample	var

SPECIAL PUBLICATION NO. 09-11

PARTICIPATION, EFFORT, AND HARVEST IN THE SPORT FISH BUSINESS/GUIDE LICENSING AND LOGBOOK PROGRAMS, 2006-2008

by

Dora Sigurdsson

and

Bob Powers

Division of Sport Fish Research and Technical Services, Anchorage

Alaska Department of Fish and Game
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ABSTRACT

In 2006, 1,677 sport fishing businesses and 3,454 guides licensed under the Alaska Department of Fish and Game guide and business registration program, signifying intent to provide sport fishing services in Alaska. The program licensed 1,695 businesses and 3,531 guides in 2007, and 1,659 sport fishing businesses and 3,522 sport fishing guides in 2008. Of the 1,659 sport fishing businesses registered in 2008, 1,525 were combination owner/guide licenses. Based on the 2008 physical addresses of both the businesses and guides, 90% of the businesses were residents of Alaska, and 10% were from other residency strata (defined as nonresidents), 72% of the guides were residents and 28% were nonresidents.

Of the 2,553 saltwater logbooks issued in 2008, 2,089 were activated, and of the 2,538 freshwater logbooks issued in 2008, 1,785 were activated. Of those businesses that submitted logbook information in 2008, 58% offered saltwater services, and 42% offered freshwater guided services. In 2006, logbook records show that 1,368 saltwater vessels were active, 1,409 were active in 2007 and 1,355 were active in 2008. On average during those three years, 55% of the saltwater vessels were active in Southeast Alaska and 45% were active in Southcentral Alaska.

A total of 65,671 saltwater charter trips were conducted in 2006, 67,152 trips in 2007, and 62,006 trips in 2008 statewide. On average, 84% of the saltwater angler days were nonresidents, 12% were residents and 4% were crew, comped fishing or unknown residency. In freshwater, 46,781 trips were taken in 2006, 48,697 in 2007, and 48,501 in 2008. Of the statewide freshwater trips, 90% of the angler days were nonresidents, 8% were residents, and 2% were crew fishing or unknown residency.

Average saltwater salmon harvests between 2006 and 2008 show that coho and king salmon were the predominant species, consisting of 67% and 15% of the harvest respectively statewide. Saltwater bottomfish harvests between 2006 and 2008 show that Pacific halibut were the predominant species with 68% of the total saltwater harvest statewide. Total halibut harvest statewide ranged from 379,473 fish in 2007 to a low of 339,718 fish in 2008. In freshwater, coho salmon were the predominant harvested species, followed by sockeye and then king salmon.

Key words: Sport fishing, guide and business registration, freshwater logbook, saltwater logbook, participation, effort, harvest, sport fishing vessel, Pacific halibut, salmon, bottomfish, Southeast Alaska, Southcentral Alaska

BACKGROUND

The Alaska Department of Fish and Game (ADF&G) Division of Sport Fish (DSF) has operated a program since 1998 to register and license both sport fishing guides and sport fishing guide businesses and to collect information on sport fishing participation, effort, and harvest by saltwater and freshwater guided clients. This report briefly summarizes the approach, history, and results of this program for 2006 through 2008.

GUIDE AND BUSINESS REGISTRATION AND LICENSING

The activities of the guided sport fishing industry in Alaska have significantly increased in recent years with implications to fish allocation and management decisions. Resolution of related issues was hampered by lack of information regarding the industry and its impact on fishery resources in many parts of Alaska. The sport fishing guide and business registration and licensing programs were designed to provide a comprehensive system to better define this diverse industry throughout Alaska. A brief history of the statewide registration and licensing process follows.

Beginning in May 1995 the owner(s) of any business that engaged in sport fish guiding of anglers anywhere in Alaska were required to register their business information, employees acting as sport fishing guides for the business, and listing all vessels used for guiding. In 1997 sport fishing guides were required to register and provide information about the employing business (Dean 2001; Dean and Howe 1999).

In 1998, the Alaska Board of Fisheries (BOF) adopted new statewide sport fishing guide registration regulations and definitions during their February Statewide Finfish meeting in Girdwood, Alaska (5 AAC 75.075: *Sport Fishing Services and Sport Fishing Guide Services; License Requirements; Regulations of Activities)*. It should be stressed that this was a registration process, not a licensing process. No fees were required and businesses and guides were allowed to provide services in any area of the state, assuming other regulatory requirements were met. In 1998 ADF&G registered guide businesses and guides and stopped registering charter vessels, because the Commercial Fisheries Entry Commission (CFEC) implemented a licensing program for all vessels to be used for guided sport fishing. From 1998 through 2004, ADF&G continued to register sport fishing businesses and sport fishing guides.

On May 11, 2004, the Alaska Legislature adopted House Bill 452 (HB 452), that established licensing requirements for sport fishing guide business owners and sport fishing guides on a statewide basis. This bill was created to establish minimum professional standards that were required of both freshwater and saltwater sport fish guides and business owners before a license could be obtained. The standards were established to protect consumers and to promote the viability and legitimacy of a professional sport fish guide industry. Businesses providing sport fish guided services were now required to obtain a State of Alaska Occupational Business License and hold liability insurance with a minimum of $300,000 coverage for all incidents in a year (AS 16.40.260). Licensed sport fishing guides were required (1) to be citizens of the United States, Canada, or Mexico, (2) hold a current first aid card, (3) have a current year Alaska sport fishing license and (4) have a valid U.S. Coast Guard operator's license if they were to operate a motorized vessel in navigable waters. License application forms and the information collected have remained consistent in design from 2006 through 2008 (Appendix A).

LOGBOOKS

In February, 1998 the BOF adopted regulations (5 AAC 75.076) requiring logbooks for saltwater charter vessels statewide. Information on the amounts and locations of charter activity and actual participation and harvest by individual vessels and businesses was needed by the BOF for allocation and management of Chinook salmon *Oncorhynchus tshawytscha*, rockfish *Sebastes* spp., and lingcod *Ophiodon elongatus*, and by the North Pacific Fisheries Management Council (NPFMC) for allocation of Pacific halibut *Hippoglossus stenolepis*. To meet these information needs ADF&G implemented a saltwater sport fishing charter vessel logbook program for DSF Region I, Southeast Alaska (Southeast), and Region II, Southcentral Alaska (Southcentral; Table 1; Figure 1).

In 1999, the NPFMC was considering proposals to limit the guided sport halibut harvest. Their concerns were: (1) that growth in this fishery was reallocating resources away from the individual fishing quota (IFQ) commercial longline fishery, and (2) that in some areas there was overcapitalization and localized depletion of the halibut resource. NPFMC endorsed a two-prong approach to resolve the perceived impact of increased guided charter halibut fishing. The first was establishment of guideline harvest limits (GHL) for International Pacific Halibut Commission (IPHC) Areas 2C and 3A (Figure 2), and the second was a process to establish local area management plans for halibut fisheries in coastal communities.

Since 1998, the logbook design has undergone annual revisions, driven primarily by changes or improvements in the collection of halibut, lingcod and rockfish data through the logbook program, Statewide Harvest Survey (SWHS), and expanded port sampling programs. House Bill

452, adopted in 2004, not only established new licensing requirements, but also established a logbook reporting requirement for all freshwater businesses in addition to the existing saltwater reporting requirements. For various reasons, both technical and policy-based, information on halibut harvests was not collected from 2002 through 2005. The collection of halibut data was resumed in 2006. In addition, the 2006 logbook was redesigned to require reporting of angler license numbers and the harvest and release numbers by angler in an effort to improve reporting and facilitate evaluation of the quality of logbook data (Appendix C).

The data from logbooks are compiled to show where fishing effort occurs, the extent of participation, and the species and numbers of fish kept and released by individual clients. This information is used for regulation and the development and management of fisheries, for project evaluation, and for formulation of department policies and priorities that reflect angler needs, concerns, and preferences. It also provides ADF&G with a tool to promote management of Alaska's resources for sustained yield.

Table 1.–Division of Sport Fish regions and management areas.

	Regions
SE	Southeast Alaska
SC	Southcentral Alaska
AYK	Arctic-Yukon-Kuskokwim
	Areas
Southeast Alaska	
A	Ketchikan
B	Prince of Wales Island
C	Kake, Petersburg, Wrangell, Stikine
D	Sitka
E	Juneau
F	Haines-Skagway
G	Glacier Bay
H	Yakutat
Southcentral Alaska	
J	North Gulf Coast/Prince William Sound
K	Knik Arm Drainage
L	Anchorage
M	Susitna River Drainage
N	West Side Cook Inlet
P	Kenai Peninsula
Q	Kodiak
R	Naknek River Drainage/Alaska Peninsula Area
S	Kvichak River Drainage
T	Nushagak, Wood River and Togiak
Arctic-Yukon-Kuskokwim	
I	Upper Copper River Drainage
U	Tanana River Drainage
V	Kuskokwim River/Kuskokwim Bay Drainages
W	Norton Sound/Seward Peninsula
X	Northwest Alaska
Y	Yukon River Drainage
Z	North Slope/Brooks Range

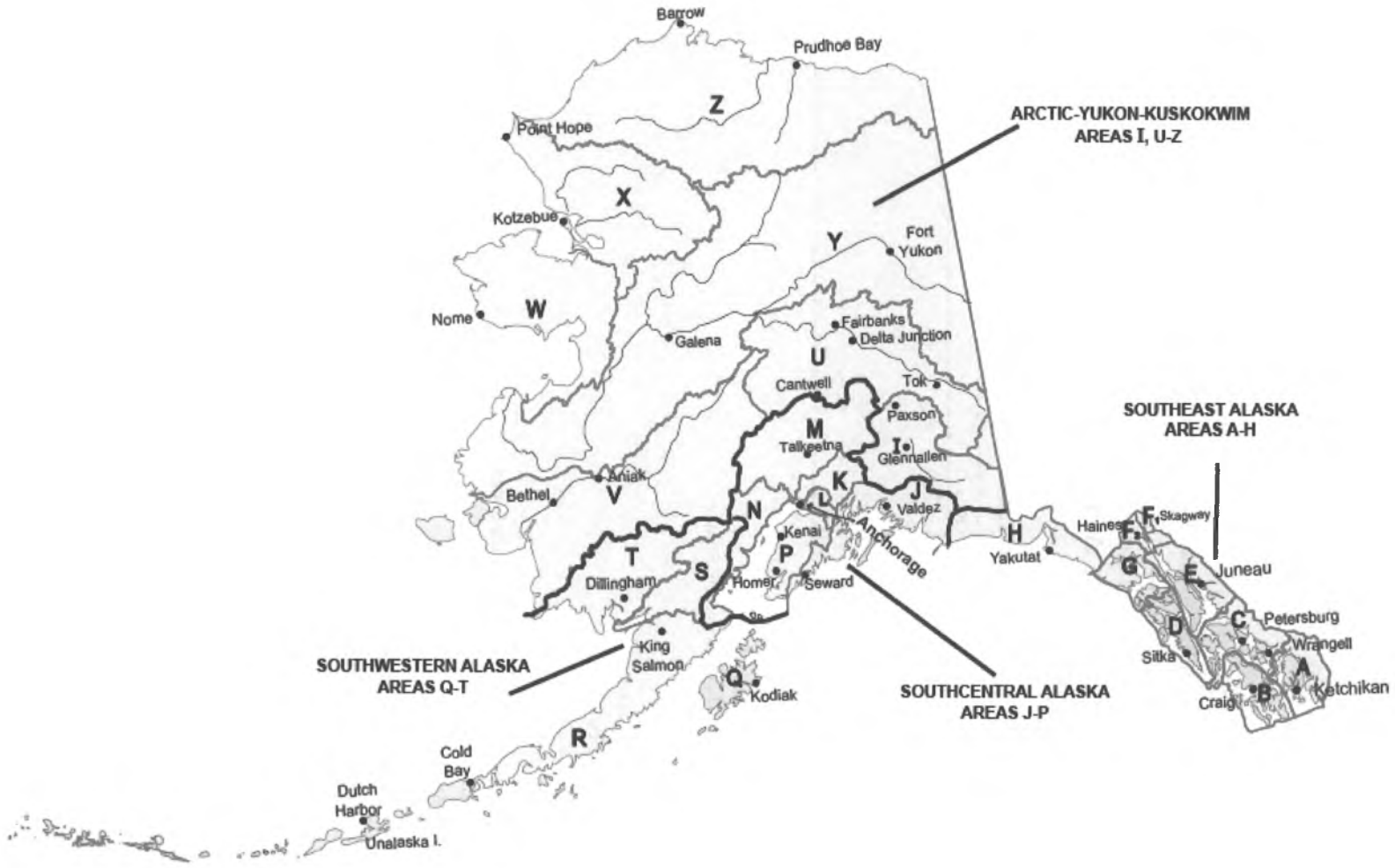


Figure 1.–Map of Alaska and Division of Sport Fish regions and management areas.

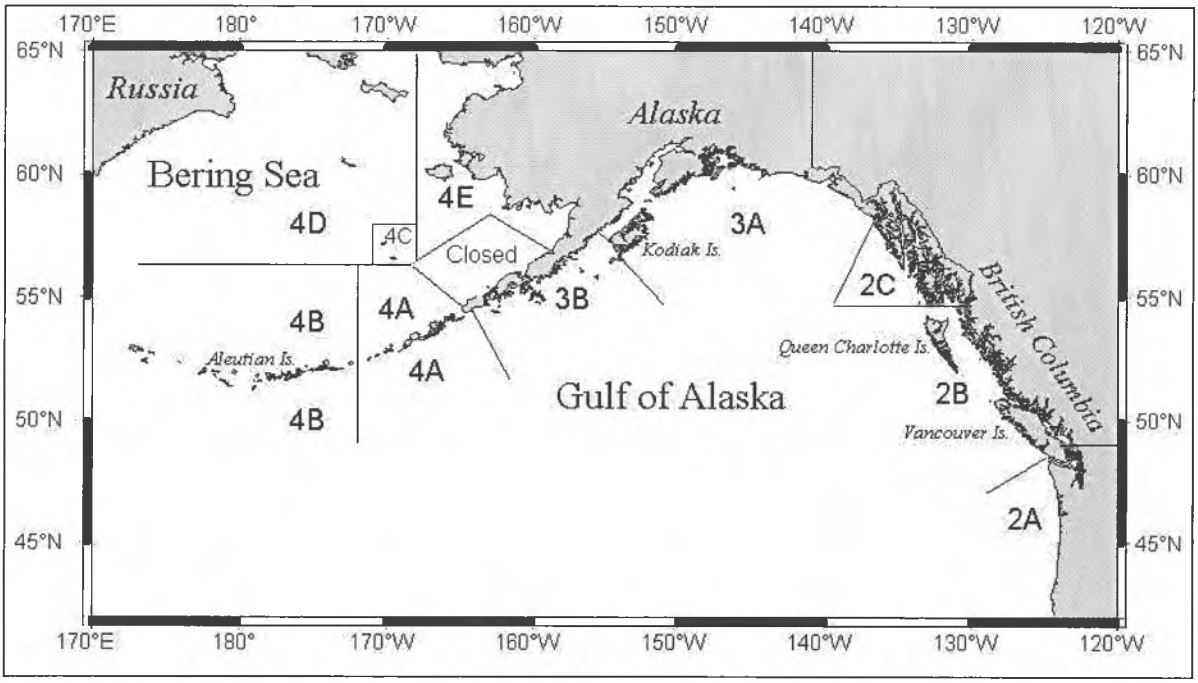


Figure 2.–International Pacific Halibut Commission (IPHC) regulatory areas.

Currently, a logbook record is required for every chartered or guided trip taken with clients, defined as an outing with one group of clients that ends when the clients and their fish (if fish were kept) are offloaded. Each trip is associated with an individual licensed business and guide.

VESSEL REGISTRATION

In addition to establishing a licensing program and statewide freshwater logbook requirement, HB 452 included establishment of a vessel registration program to be conducted by ADF&G as part of the logbook program to monitor the number of vessels used in the guided marine and freshwater fisheries. All boats used in marine or fresh water were referred to as "charter or guide boats" regardless of their size or the manner in which they are used. All vessels used in the charter guide industry were required to be registered with ADF&G. Vessel registration information was collected when logbooks were issued to a business. Registration information included the Department of Motor Vehicles or DMV number or the U.S. Coast Guard vessel documentation number. Upon completion of vessel registration with ADF&G, each vessel was provided with two decals and year tags to indicate that the vessel is used in the guide industry (Appendix B3 and B4). Decals must be applied and visible on both sides of the vessel.

METHODS

GUIDE AND BUSINESS LICENSING

Businesses and guides can be licensed to provide sport fishing guided services if they meet the minimum qualifications specified in regulation (AS 16.40.260 and AS 16.40.270).

During the month of January from 2006 through 2008, the Division of Sport Fish mailed renewal license applications to each sport fishing guide and sport fishing business that was licensed in the previous year. In addition, guides and businesses could obtain a license in person at local

ADF&G offices or through the Internet. The license applications could be used in any of three ways (Appendix A):

- To license a business only,
- To license a guide only,
- To license a combination business and guide (an owner/operator where the owner also conducted the guiding).

The licensing process collected business owner or guide name, permanent mailing information, permanent and inseason phone number if applicable. Additionally, the name of the business, name of the business owner, occupational business license number, insurance company information and insurance binder or policy number and effective dates were required. A guide is required to be a citizen of the United States, Canada, or Mexico, hold a current first aid card and have a current year Alaska sport fishing license along with any tags or permits required for specific fisheries. If a guide planned to operate a motorized vessel on navigable waters with clients on board, the guide was required to have a current U.S. Coast Guard Operator's License and provide that number and expiration date on the license application.

Unique license numbers were assigned according to how licensing occurred. License numbers did not remain the same in subsequent years. If an operator or guide licensed at an ADF&G office, a pre-numbered application was used and that number became the license number for that year. Renewal or internet license applications were randomly assigned numbers by the computer database that processed the information

Once the license applications were reviewed for completeness and accuracy, DSF mailed a wallet-sized license to each guide or business. Those applicants who licensed by going to an ADF&G office received a copy of their license, which allowed them to operate immediately. Those who licensed using the renewal application or by applying through the Internet, were required to wait until they received their license in the mail prior to operating or providing guiding services.

LOGBOOK DATA COLLECTION

A standard statewide saltwater logbook design was used from 2006 through 2008 (Appendix B). The freshwater logbook underwent very few changes between 2006 and 2008. Logbook reporting is a mandatory process governed by regulation (AS 16.40.280). As such, the reporting process was considered to be a census of all charter/guided trips. Logbooks were available and issued from ADF&G area offices located statewide, in addition to vendors located in Valdez and Seward.

Other than a few minor design changes, both the saltwater and freshwater logbooks collected the same information during all three years. Some changes were made to improve or simplify the use of the forms based on operator input, and to improve the capture of client and crew harvest information. Some of the annual design changes in the saltwater logbook were driven primarily by changes or improvements in the collection of halibut and rockfish data, and by requests from the NPFMC for information needed for allocation of halibut. In 2006, both logbooks were redesigned to require reporting of angler license numbers and the harvest and release numbers by angler in an effort to improve reporting and facilitate evaluation of the quality of logbook data. The most significant changes made to the saltwater logbook occurred between 2005 and 2006 (Appendix C).

Changes between the 2005 and 2006 saltwater logbooks included:

- The data page design went from a single page designed to collect information from nine different trips to a data page that collected information from one unique trip per page.
- A section to collect Business and Vessel Information was added. Business and Guide license numbers along with the Alaska Boat Registration number (AK. #) or U.S.C.G. documentation number was recorded on every data page. This information was intended to confirm that the information was associated with the correct business on record, and to validate the vessel registration information.
- A section to collect Trip information was added. Trip information collected the date fished, port or community where clients or fish were off-loaded, total number of clients on the vessel including those that did not fish, targeted species (salmon or bottomfish), primary statistical area fished, maximum number of rods fished, and number of boat hours fished. This design change resulted in more detailed information unique to each trip taken with a group of clients.
- A section to collect Individual Angler and Catch Information was added. In 2006, the collection of halibut information resumed. The new design also required the reporting of individual angler license numbers along with harvest and release numbers by angler in an effort to improve reporting and facilitate evaluation of the quality of logbook data.
- A signature line was added that required the guide who led the trip to sign their name certifying that the information was true and correct to the best of their knowledge.
- A notice statement drafted by the NPFMC was printed within the front cover of the 2006 saltwater logbook. The notice announced that a control date of December 9, 2005 was being established. Those businesses and guides not participating in the Southeast or Southcentral charter halibut industry by this date might not be eligible for future access and/or quota in these fisheries.

No significant changes took place in the freshwater logbook design between 2005 and 2006 (Appendix D).

Changes between the 2006 and 2007 saltwater logbooks include:

- Additional client information was obtained, to indicate if "comped" anglers fished. A "comped" angler was an angler who did not compensate the guide for that charter trip. By including "comped" anglers, the data captured by onsite dockside samplers and data from the logbook census were more comparable, since all anglers on board a charter vessel and their catches were now being counted.
- Vessel AK # or U.S.C.G. documentation numbers were no longer being collected on each data page. The vessel information collected during the logbook assignment to a business on the sign-out sheet was adequate.

No significant changes took place in the freshwater logbook design between 2006 and 2007 (Appendix D).

The changes to the saltwater logbook forms between 2007 and 2008 were in response to requests by the NPFMC in an effort to continue improvement in the collection of halibut information in preparation for a potential IFQ or moratorium program. Changes between the 2007 and 2008 saltwater logbooks include:

- A request to collect information on the port or community where the fishing trip began.
- Indicate the IPHC area fished: 2C, 3A, 3B or 4.
- The collection of the angler's first and last name in addition to the angler license number.
- The number of halibut kept year-to-date (YTD) in IPHC area 2C in anticipation of an annual limit on guided halibut harvest per client. The annual limit was never implemented but this column had already been added and logbooks distributed prior to the decision to not implement an annual halibut limit.
- The signature of an angler on the back side of each trip sheet if that angler kept halibut in 2C as verification of the information provided on the data page.

No significant changes took place in the freshwater logbook between 2007 and 2008 (Appendix D).

Saltwater Logbook Forms

A saltwater logbook consisted of the cover page, schedule of reporting deadlines, one logbook check out sheet to show the business to which the logbook was issued and register the saltwater vessel, a set of instructions for filling out the information on the logbook sheets, and 50 data sheets to record trip information. Data collection on each of the 50 pages consisted of:

- ADF&G business owner license number;
- ADF&G guide license number for the guide leading the trip;
- Date that fishing took place;
- Port or community where fishing began;
- Port or community of off loading,
- Total number of paying clients on the vessel (including those that did not fish, but not including "comped" anglers or crew members that fished);
- Primary statistical area fished while targeting salmon or bottomfish;
- Number of boat hours fished;
- Crew, client, and "comped" angler's current ADF&G sport fishing license or PID (permanent fishing license) number, birthdate of youth anglers under the age of 16;
- First and last name of each client and youth angler;
- Client residency(Alaska resident/nonresident of Alaska);
- A breakdown by fish species kept (and/or released) by each individual angler.

During a saltwater charter trip, the operator must decide if his/her gear or fishing methods are effectively targeting bottomfish, salmon or both. A 6-digit statistical code where most of the fish were caught or targeted is logged for each trip. Statistical maps were provided to the operator upon logbook issuance.

Saltwater species information collected included kept and released information for "large" Chinook (king salmon) 28" and longer and for "small" Chinook (king salmon) less than 28". Also recorded were coho *O. kisutch*, sockeye *O. nerka*, pink *O. gorbuscha*, and chum *O. keta*

salmon, halibut, lingcod, pelagic rockfish, yelloweye, and other nonpelagic rockfish, salmon shark *Lamna ditropis*, and a category for the number of all other species not already listed (Appendix C).

To determine the number of businesses and guides that were "active" in the industry, a cross reference is made to the logbooks to determine if actual guided trips were provided. If ADF&G received at least one charter vessel trip form that reported targeted effort, the charter operation turning in the form was considered an "active" bottomfish or salmon charter operator with an "active" vessel.

Freshwater Logbook Forms

A freshwater logbook consisted of the cover page, schedule of reporting deadlines, one logbook check out sheet to show the business to which the logbook was issued, a freshwater vessel registration page that collects the unique AK # assigned by the Department of Motor Vehicles (DMV) or a United States Coast Guard (USCG) documentation number and primary drainage, a set of instructions for filling out the information on the logbook sheets, and 50 data sheets to record trip information. Data collection on each of the 50 pages consisted of:

- ADF&G guide license number,
- Date that fishing took place,
- Specific name of river, stream or lake fished,
- Site code of site fished as reference within a list provided with each logbook,
- Number of logbook pages used for a specific trip,
- Name of any other species kept,
- Crew, client, and "comped" angler's current ADF&G sport fishing license number, and a youth angler designation for anglers under 16 years of age.
- Client residency,
- A breakdown by fish species kept and released.

Upon acquiring a freshwater logbook, the operator registers all vessels that may be used during the course of the fishing season. Freshwater vessel registration requires that the vessel already have a unique AK # assigned by DMV or a USCG documentation number. Freshwater vessels primarily have AK #'s. The operator must provide the AK # and indicate the primary freshwater drainage where the vessel will operate.

The freshwater logbook does not collect targeted species information like the saltwater logbook, it collects information on species kept and released regardless of what was targeted or sought after. A trip is counted if a logbook data page is submitted with effort information regardless of catch. Freshwater trips are assigned a region of the state based on the name of the site fished, each freshwater site is assigned a unique regional alpha code followed by a numeric code within the region in which it is located (Table 1).

Freshwater information collected were: kept and released numbers for king, coho, and sockeye salmon, cutthroat *O. clarkii*, rainbow and steelhead trout *O. mykiss*, lake trout *Salvelinus namaycush*, Dolly Varden *S. malma*, Arctic grayling *Thymallus arcticus*, northern pike *Esox lucius*, sheefish *Stenodus leucichthys* and a category for the number of all other fish not already listed (Appendix D).

Business operators are allowed to and even encouraged to pick up as many logbooks as they anticipated needing during the course of the season. The ability to acquire as many logbooks as are needed prevents them from having to make multiple trips to an ADF&G office. As a result, numerous businesses ended up getting more logbooks than were eventually used. Because of this, ADF&G differentiates between the number of logbooks issued versus the number that are actually used or activated.

LOGBOOK OUTREACH AND VERIFICATION

In December 2005, the Commissioner of the ADF&G issued a statement that detailed the strategies for assuring the accuracy of reporting of Pacific halibut harvest for the saltwater charter logbook. (Appendix E).

Outreach

An outreach program was initiated to reach as many operators as possible to field questions and to ensure compliance with the reporting requirements. The outreach program was conducted on-site (in the field) by ADF&G employees and off-site from the Anchorage ADF&G office.

On-site Logbook Inspections

Logbook outreach occurred in parts of Southeast and Southcentral regions in conjunction with existing creel survey and port sampling programs. "Courtesy logbook inspections" were conducted as time allowed by ADF&G creel and port sampling technicians during their regular dockside checks of the primary fisheries from May through September. In addition, management staff conducted periodic checks of charter logbooks, mostly in 2006. Logbooks were inspected to make sure that they were filled out correctly, and staff answered any questions about how they should be filled out. These checks were not intended for enforcement or for evaluating the accuracy of data but rather as another opportunity to encourage compliance and completeness and as an indicator of how important logbook data are to ADF&G. These inspections were conducted as time allowed by ADF&G creel and port sampling technicians during their regular dockside checks for the primary fisheries from May through September.

Off-site Logbook Review

The goal of the outreach program was to ensure compliance with all reporting requirements, by emphasizing education early in the season. Off-site outreach was conducted by the Division of Sport Fish, Research and Technical Services (RTS) staff in the Anchorage office. All logbook trip data was subject to a reporting deadline. Logbook data pages were required to be completed and returned to ADF&G on a weekly basis as specified in the instructions of both the saltwater and freshwater logbooks. Timely submission was a requirement to facilitate recall and to allow ADF&G staff to review each data page for completeness and legibility. All logbook data sheets were received by RTS in Anchorage where ADF&G data entry staff date-stamped each data page with the date received, reviewed each page for incomplete, illegible or erroneous information, and conducted phone calls to business owners and guides for follow up and clarification. Calls early in the season were intended to alleviate repeat errors in reporting which were thought to result in fewer calls being necessary later in the fishing season.

As logbook data sheets were received, RTS staff conducted reviews by monitoring all data for completion and legibility prior to data entry. In the event that some of the logbook data sheets required verification from the operator or guide, staff would place phone calls

Phone calls to the business owners and guides significantly improved the quality of the data, minimized reoccurring mistakes by the guide, increased compliance, and contributed to the outreach portion of this program. Logbook data entry staff contacted charter operators to resolve logbook reporting issues and to improve future reporting. These calls were intended to improve data quality and reinforce the message to the guide industry that logbook data are important and are consistently being reviewed. In 2006, 3,011 calls were made to operators, 1,415 in 2007 and 2,160 in 2008. Follow up phone calls have become a valuable outreach tool and will continue to be a standard procedure in the future.

Verification

Logbook data were compared to actual counts of harvested fish (verified) and to reported harvest data (unverified) from onsite interviews. These comparisons are ongoing and are part of a more comprehensive evaluation of logbook data quality (Meyer et al. 2008).

Two unique methods were used to conduct post-season verification of logbook data:

1. A comparison was made between logbook data and guided trip information collected from the Alaska Statewide Harvest Survey (SWHS; Jennings et al. 2007).
2. The data collected from the logbooks was compared to the data collected in the saltwater creel programs administered through ADF&G. Saltwater creel programs include the *Assessment of Recreational Halibut and Groundfish Harvest in Southcentral Alaska* program in Homer, the *Haines Marine Sport Fishery Harvest in Southeast Alaska*(Chapell *In prep*), and the *Harvest estimates for selected marine sport fisheries in Southeast Alaska* (Wendt and Jaenicke *In prep*).

RESULTS

Guide and Business Licensing

In 2006, 1,677 sport fishing businesses and 3,454 guides were licensed with ADF&G. In 2007, 1,695 businesses and 3,531 guides were licensed, and in 2008, 1,659 sport fishing businesses and 3,522 sport fishing guides were licensed with ADF&G to provide sport fishing services in Alaska. The total number of businesses and guides includes all saltwater and freshwater operators. Of the 1,659 sport fishing businesses licensed in 2008, 1,525 were combination owner/guide licenses. Physical addresses of both the businesses and guides in 2008 indicated that 90% of the businesses were Alaska residents, and 10% were from other residency strata (defined as nonresidents), 72% of the guides were residents and 28% were nonresidents.

The licensed businesses and guides were subtotaled by region for Southeast, Southcentral, and Other Alaska, including the Arctic-Yukon-Kuskokwim area and nonresident license applicants.

From 2006 through 2008, an average of 28% of the licensed businesses had physical addresses in Southeast, 57% in Southcentral, 5% had permanent addresses in other parts of Alaska, and 10% had nonresident addresses based on their license applications. From 2006 through 2008, an average of 22% of the licensed guides had permanent addresses in Southeast, while 47% in Southcentral, 4% in other parts of Alaska and 27% had nonresident addresses based on their license applications (Table 2).

Based on the submission of saltwater logbook data pages with trip information in 2006, 777 businesses provided saltwater services and 503 provided freshwater services, and 140 businesses

provided both freshwater and saltwater services. In 2007, 786 businesses provided saltwater services and 513 provided freshwater services and 132 businesses provided both freshwater and saltwater services. In 2008, 766 businesses provided saltwater services and 508 provided freshwater services and 122 businesses provided both freshwater and saltwater services (Table 3 and Table 4).

Table 2.–Number of licensed businesses and guides by region, 2006–2008.

Licensed Businesses [a]			
Region [b]	2006	2007	2008
Southeast	38	39	43
Southcentral	62	70	66
Other Alaska	5	2	2
Resident Total	105	111	111
Other U.S.	25	18	23
Foreign	0	0	0
Nonresident Total	25	18	23
Total business only licenses	130	129	134
Combination Licenses [c]			
Region			
Southeast	432	422	413
Southcentral	891	910	887
Other Alaska	71	74	75
Resident Total	1,394	1,406	1,375
Other U.S.	153	160	150
Foreign	0	0	0
Nonresident Total	153	160	150
Total	1,547	1,566	1,525
Total business only and combination business/guide licenses	1,677	1,695	1,659
Licensed Guides [d]			
Region			
Southeast	346	334	319
Southcentral	731	777	765
Other Alaska	66	75	80
Resident Total	1,143	1,186	1,164
Other U.S.	762	779	831
Foreign	2	0	2
Nonresident Total	764	779	833
Total	1,907	1,965	1,997
Total licensed guides	3,454	3,531	3,522

Note: Data are current as of 07/08/09.

[a] Business only licenses that do not include the owner as a guide.

[b] Region assigned based on physical address indicated at time of licensing.

[c] Combination licenses that include the business and the business owner as the guide.

[d] Guide license only, no business license.

Table 3.–Number of active saltwater businesses and guides by region, 2006–2008.

	Active Businesses[a]			Active Guides[b]		
Region[c]	2006	2007	2008	2006	2007	2008
SE	439	430	429	881	873	860
SC	479	488	459	772	766	740
Total[d]	917	918	888	1,603	1,602	1,562

Note: Data are current as of 07/16/09.

[a] Business counts are based on the business number listed on the signout sheet of a logbook (this can be a business only or a combined business/guide license).

[b] Guide counts are based on the guide number written on each log page (this can be a guide only or a combined business/guide license).

[c] Region is based on the port of offloading, salmon stat area and bottomfish stat area.

[d] Total is not additive because a business or guide could operate in both areas. Includes businesses and guides that offered both saltwater and freshwater services.

Table 4.–Number of active freshwater businesses and guides by region, 2006–2008.

	Active Businesses[a]			Active Guides[b]		
Region[c]	2006	2007	2008	2006	2007	2008
SE	69	73	70	173	177	178
SC	528	528	512	1,224	1,272	1,305
AYK	71	68	69	194	224	222
Site code missing	0	4	7	0	4	7
Total[d]	643	645	630	1,518	1,581	1,636

Note: Data are current as of 07/16/09.

[a] Business counts are based on the business number listed on the signout sheet of a logbook (this can be a business only or a combined business/guide license).

[b] Guide counts are based on the guide number written on each log page (this can be a guide only or a combined business/guide license).

[c] Region is based on the site code provided for the site fished on each log page.

[d] Total is not additive because a business or guide could operate in both areas. Includes businesses and guides that offered both saltwater and freshwater services.

VESSELS

Saltwater

The number of vessels registered to provide saltwater sport fishing charter services was 1,671 in 2006, 1,666 in 2007, and 1,604 in 2008. A vessel, though registered, is not considered "active" unless that vessel was used on a guided trip as indicated by the submission of a logbook data page. Of the 1,671 saltwater vessels registered in 2006, 1,368 were active, of the 1,666 vessels registered in 2007, 1,409 were active, and in 2008 of the 1,604 registered vessels, 1,355 were active in saltwater. Based on the primary port of operation indicated at registration and port of offloading, 746 saltwater vessels operated in Southeast, 621 operated in Southcentral, and 1 vessel operated in both Southeast and Southcentral in 2006. In 2007, 768 saltwater vessels operated in Southeast, 641 operated in Southcentral, and 0 vessels operated in both Southeast and Southcentral. In 2008, 759 saltwater vessels operated in Southeast, 596 operated in Southcentral, and 0 vessels operated in both Southeast and Southcentral (Table 5).

Logbook data indicate that vessels will target all possible species; bottomfish, salmon and both during the course of a fishing season (Table 6).

Table 5.–Number of registered and active saltwater vessels by region, 2006–2008.

	Registered Vessels			Active Vessels		
Region[a]	2006	2007	2008	2006	2007	2008
SE	926	918	907	747	768	759
SC	745	748	697	622	641	596
Total[b]	1,671	1,666	1,604	1,368	1,409	1,355

Note: Data are current as of 07/09/09.

[a] Region is based on primary port of operation listed on sign-out sheet and port of off loading, active is determined by the salmon or bottomfish statistical area.

[b] Total is not additive because vessels can operate in both areas.

Table 6.–Number of active saltwater vessels that made at least one trip in each target category, by region, 2006–2008.

		Target[a]			
Year	Region[b]	Salmon	Bottomfish	Both	No Statistical Area
2006	SE	631	495	637	5
	SC	383	551	486	6
	Total	1,014	1,046	1,123	11
2007	SE	637	494	676	49
	SC	377	576	495	32
	Total	1,014	1,070	1,171	81
2008	SE	623	534	649	56
	SC	325	546	441	22
	Total	948	1,080	1,090	78

Note: Data are current as of 07/09/09.

[a] Target is based on salmon and bottomfish statistical areas.

[b] Region is based on primary port of off loading, salmon statistical area and bottomfish statistical area.

Freshwater

Based on the primary drainage and sites fished, many more freshwater vessels operate in Southcentral than in other regions (Table 7).

Table 7.–Number of registered freshwater vessels by year and region, 2006–2008.

Year	SE	SC	AYK	Unknown	Total[a]
2006	131	1,640	219	98	2,086
2007	131	1,657	239	15	2,041
2008	122	1,738	261	8	2,128

Note: Data are current as of 07/14/09.

[a] Total not additive because a vessel could be registered and operate in more than one region.

TRIPS

Saltwater

Logbook data indicate that 65,671 saltwater charter trips were conducted statewide in 2006, 67,152 trips were conducted in 2007, and 62,006 trips were conducted in 2008. During all three years, a majority of the trips that targeted salmon only occurred in Southeast, whereas, the majority of trips that targeted bottomfish only occurred in Southcentral. During the same three years, operators in Southeast conducted significantly more trips in which both salmon and bottomfish were targeted on the same trip. If a statistical area fished was not provided, no targeted species was assigned (Table 8).

Table 8.–Number of saltwater trips by targeted species by region, 2006–2008.

		Species Targeted[a]				
Year	Region[b]	Salmon[c]	Bottomfish[c]	Both[c]	No Statistical Area	Total
2006	SE	14,309	6,146	18,628	5	39,088
	SC	3,481	15,555	7,537	10	26,583
	Total	17,791	21,702	26,165	15	65,671
2007	SE	12,759	6,144	20,633	62	39,598
	SC	2,876	16,489	8,145	44	27,554
	Total	15,635	22,633	28,778	106	67,152
2008	SE	11,338	7,368	18,634	109	37,449
	SC	2,135	15,733	6,617	72	24,557
	Total	13,473	23,101	25,251	181	62,006

Note: Data are current as of 07/09/09.

[a] Species targeted is based on the provision of salmon and bottomfish statistical areas.

[b] Region is based on the port of offloading, and salmon or bottomfish statistical areas.

[c] The same vessel can make multiple trips targeting either salmon, bottomfish or both.

Freshwater

In 2006, 46,781 freshwater guided fishing trips were taken, 48,697 were taken in 2007, and 48,501 taken in 2008. On average, 84% of the freshwater trips took place in Southcentral, 10% in the Arctic-Yukon-Kuskokwim (AYK) area, and 6% in Southeast (Table 9).

Table 9.–Number of freshwater trips by region, 2006–2008.

	Region[a]			
Year	SE	SC	AYK	Total
2006	3,038	39,512	4,231	46,781
2007	3,256	40,543	4,898	48,697
2008	3,113	40,587	4,801	48,501

Note: Data are current as of 07/16/09.

[a] Region is based on the area code on the site code listed on each log page.

[b] Unknown means the record didn't have a site code listed, thus a region could not be determined.

LOGBOOK TRIP EFFORT AND HARVEST

Statewide saltwater charter trips appear to have decreased in 2008 after a steady increase between 2006 and 2007, the number of angler days fished declined steadily since 2006. For freshwater guided fishing statewide, the number of trips and angler days fished appeared to remain steady with very slight adjustments (Table 10).

SALTWATER

An average of 82% of the saltwater logbooks that were issued were activated (effort or catch reported) each year. From 2006 through 2008, the saltwater logbook collected client residency. Records show that for those three years, 90% of the angler days of effort in the saltwater charter salmon fishery were conducted by nonresident anglers, compared with 8% by residents and 2% by crew, comped anglers or those of unknown residency. Records also indicate that for those three years, 82% of the angler days of effort in the saltwater charter bottomfish fishery were conducted by nonresident anglers, 14% by residents and 4% by crew fishing, comped anglers or those of unknown residency (Tables 11-16).

Based on the number of angler days fished from 2006 through 2008, 69% of the salmon participation took place in Southeast, and 31% in Southcentral. Within that same time period, 42% of the bottomfish participation took place in Southeast, and 58% occurred in Southcentral (Tables 11-16).

From 2006 through 2008 coho and king salmon were the predominant salmon species harvested, making up 67% and 15% respectively of the harvest statewide, with the remaining 18% consisting of a combination of other salmon (Tables 11, 13, 15).

Halibut were the most harvested bottomfish from 2006–2008, with 68% of the total harvest statewide Halibut harvests were 377,366 fish in 2006, 379,473 fish in 2007, and a low of 339,718 fish in 2008. Statewide, 32% of the halibut harvest occurred in Southeast and 68% occurred in Southcentral (Tables 12, 14, 16).

FRESHWATER

On average, 71% of the freshwater logbooks that were issued were actually activated. From 2006 through 2008, 8% of the freshwater participation occurred in Southeast, 84% occurred in Southcentral, and 8% took place in the Alaska-Yukon-Kuskokwim (AYK) or interior Alaska.

For those three years, 90% of the angler days of effort in the freshwater guided fishery were conducted by nonresident anglers, 8% were residents and 2% were crew fishing, comped anglers or those of unknown residency. The highest percent of nonresident fishing occurred in Southcentral.

From 2006 through 2008 coho, sockeye and king salmon were the predominent salmon species, making up 45%, 29% and 20% respectively on average of the harvest statewide, with the remaining 7% consisting of a combination of other salmon (Tables 17-19).

Table 10.–Saltwater and freshwater trips and angler days by region, 2006–2008.

Year	Region[a]	Saltwater		Freshwater	
		Trips	Angler Days	Trips	Angler Days
2006	SE	39,088	154,549	3,038	11,464
	SC	26,583	175,695	39,512	125,055
	AYK	0	0	4,231	10,888
	Total	65,671	330,244	46,781	147,407
2007	SE	39,599	158,551	3,256	11,671
	SC	27,553	163,964	40,543	126,387
	AYK	0	0	4,898	12,262
	Total	67,152	322,515	48,697	150,320
2008	SE	37,449	150,793	3,113	10,730
	SC	24,557	146,717	40,587	126,596
	AYK	0	0	4,801	11,833
	Total	62,006	297,510	48,501	149,159

Note: Data are current as of 08/28/09.

Table 11.–Saltwater salmon effort and harvest by region, 2006.

Region[a]	Type of Angler	Angler Days[b]	King salmon		Coho	Sockeye	Pink	Chum
			Large ≥ 28"	Small < 28"				
SE	Resident	2,028	1,676	29	2,021	7	254	50
	Nonresident	126,010	54,034	1,018	131,943	831	26,738	2556
	Crew	503	30	0	41	56	11	7
	Unknown	1,697	808	15	1,825	4	453	30
	Total	130,238	56,548	1,062	135,830	898	27,456	2,643
SC	Resident	13,250	1,613	102	15,670	106	662	33
	Nonresident	44,086	8,292	476	57,340	619	4,574	287
	Crew	7,560	532	57	3,643	100	227	10
	Unknown	468	26	1	718	14	89	0
	Total	65,364	10,463	636	77,371	839	5,552	330
Total	Resident	15,278	3,289	131	17,691	113	916	83
	Nonresident	170,096	62,326	1,494	189,283	1,450	31,312	2,843
	Crew	8,063	562	57	3,684	156	238	17
	Unknown	2,165	834	16	2,543	18	542	30
	Total	195,602	67,011	1,698	213,201	1,737	33,008	2,973

Note: Data are current as of 07/09/09.

[a] Region is based on the port of offloading, salmon statistical area and bottomfish statistical area.

[b] Angler days totals all anglers who fished on a day when a salmon statistical area was entered, plus angler days where an angler harvested a salmon when a bottomfish statistical area was provided.

Table 12.–Saltwater bottomfish effort and harvest by region, 2006.

Region[a]	Type of Angler	Angler Days[b]	Halibut	Lingcod	Rockfish			Salmon Shark
					Pelagic	Yelloweye	Other Non-Pelagic	
SE	Resident	1,973	2,425	239	433	284	260	0
	Nonresident	100,311	110,050	12,313	37,004	20,255	16,006	60
	Crew	592	176	37	70	6	19	0
	Unknown	1,421	1,771	172	704	222	230	0
	Total	104,297	114,422	12,761	38,211	20,767	16,515	60
SC	Resident	34,662	58,727	2,814	8,123	2,362	917	117
	Nonresident	104,143	175,281	6,835	24,846	4,893	2,072	104
	Crew	19,655	27,708	715	2,182	552	149	3
	Unknown	854	1,228	45	244	64	31	0
	Total	159,314	262,944	10,409	35,395	7,871	3,169	224
Total	Resident	36,635	61,152	3,053	8,556	2,646	1,177	117
	Nonresident	204,454	285,331	19,148	61,850	25,148	18,078	164
	Crew	20,247	27,884	752	2,252	558	168	3
	Unknown	2,275	2,999	217	948	286	261	0
	Total	263,611	377,366	23,170	73,606	28,638	19,684	284

Note: Data are current as of 07/09/09.

[a] Region is based on the port of offloading, bottomfish statistical area and salmon statistical area.

[b] Angler days totals all anglers who fished on a day when a bottomfish statistical area was entered, plus angler days where an angler harvested a bottomfish when a salmon statistical area was provided.

Table 13.–Saltwater salmon effort and harvest by region, 2007.

Region[a]	Type of Angler	Angler Days[b]	King salmon		Coho	Sockeye	Pink	Chum
			Large ≥ 28"	Small < 28"				
SE	Resident	1,892	1,332	13	2,454	4	545	97
	Nonresident	131,423	48,331	1,559	192,163	1,226	68,117	7772
	Comped	206	75	0	181	0	48	2
	Crew	193	27	0	122	8	10	3
	Unknown	476	70	4	576	3	233	32
	Total	134,190	49,835	1,576	195,496	1,241	68,953	7,906
SC	Resident	12,924	1,175	97	20,722	262	720	20
	Nonresident	45,803	6,947	468	70,041	1,196	3,846	204
	Comped	426	60	1	403	4	12	0
	Crew	579	4	0	131	0	8	0
	Unknown	267	15	0	473	1	33	0
	Total	59,999	8,201	566	91,770	1,463	4,619	224
Total	Resident	14,816	2,507	110	23,176	266	1,265	117
	Nonresident	177,226	55,278	2,027	262,204	2,422	71,963	7,976
	Comped	632	135	1	584	4	60	2
	Crew	772	31	0	253	8	18	3
	Unknown	743	85	4	1,049	4	266	32
	Total	194,189	58,036	2,142	287,266	2,704	73,572	8,130

Note: Data are current as of 07/09/09.

[a] Region is based on the port of offloading, salmon statistical area and bottomfish statistical area.

[b] Angler days totals all anglers who fished on a day when a salmon statistical area was entered, plus angler days where an angler harvested a salmon when a bottomfish statistical area was provided.

Table 14.–Saltwater bottomfish effort and harvest by region, 2007.

Region[a]	Type of Angler	Angler Days[b]	Halibut	Lingcod	Rockfish			Salmon Shark
					Pelagic	Yelloweye	Other Non-Pelagic	
SE	Resident	1,747	2,204	159	535	229	286	0
	Nonresident	109,487	120,798	8,429	46,267	19,155	18,078	54
	Comped	176	138	11	48	11	13	0
	Crew	227	79	9	28	18	11	0
	Unknown	314	352	8	92	41	73	0
	Total	111,951	123,571	8,616	46,970	19,454	18,461	54
SC	Resident	34,979	60,016	3,343	11,210	2,475	963	94
	Nonresident	113,337	193,271	11,044	40,488	6,601	2,529	95
	Comped	1,064	1,553	98	393	63	22	0
	Crew	1,166	259	21	60	12	4	0
	Unknown	518	803	66	179	39	8	1
	Total	151,064	255,902	14,572	52,330	9,190	3,526	190
Total	Resident	36,726	62,220	3,502	11,745	2,704	1,249	94
	Nonresident	222,824	314,069	19,473	86,755	25,756	20,607	149
	Comped	1,240	1,691	109	441	74	35	0
	Crew	1,393	338	30	88	30	15	0
	Unknown	832	1,155	74	271	80	81	1
	Total	263,015	379,473	23,188	99,300	28,644	21,987	244

Note: Data are current as of 07/09/09.

[a] Region is based on the port of offloading, bottomfish statistical area and salmon statistical area.

[b] Angler days totals all anglers who fished on a day when a bottomfish statistical area was entered, plus angler days where an angler harvested a bottomfish when a salmon statistical area was provided.

Table 15.–Saltwater salmon effort and harvest by region, 2008.

Region[a]	Type of Angler	Angler Days[b]	King salmon		Coho	Sockeye	Pink	Chum
			Large ≥ 28"	Small < 28"				
SE	Resident	1,762	427	6	1,762	1	371	22
	Nonresident	119,183	20,076	664	122,787	725	46,620	3323
	Comped	129	19	0	81	0	34	3
	Crew	136	6	0	99	0	7	0
	Unknown	476	24	2	343	4	260	9
	Total	121,686	20,552	672	125,072	730	47,292	3,357
SC	Resident	10,336	834	96	12,933	74	904	79
	Nonresident	36,752	4,437	505	47,005	678	4,907	118
	Comped	464	37	9	335	19	44	1
	Crew	763	19	0	164	2	8	1
	Unknown	194	4	2	260	8	10	0
	Total	48,509	5,331	612	60,697	781	5,873	199
Total	Resident	12,098	1,261	102	14,695	75	1,275	101
	Nonresident	155,935	24,513	1,169	169,792	1,403	51,527	3,441
	Comped	593	56	9	416	19	78	4
	Crew	899	25	0	263	2	15	1
	Unknown	670	28	4	603	12	270	9
	Total	170,195	25,883	1,284	185,769	1,511	53,165	3,556

Note: Data are current as of 07/09/09.

[a] Region is based on the port of offloading, salmon statistical area and bottomfish statistical area.

[b] Angler days totals all anglers who fished on a day when a bottomfish statistical area was entered, plus angler days were an angler harvested a salmon when a bottomfish statistical area was provided.

Table 16.–Saltwater bottomfish effort and harvest by region, 2008.

Region[a]	Type of Angler	Angler Days[b]	Halibut	Lingcod	Rockfish			Salmon Shark
					Pelagic	Yelloweye	Other Non-Pelagic	
SE	Resident	1,710	1,819	161	746	265	288	0
	Nonresident	107,631	108,155	7,307	67,901	17,991	20,420	26
	Comped	142	127	7	37	16	30	0
	Crew	164	67	4	92	8	23	0
	Unknown	409	386	20	187	48	149	0
	Total	110,056	110,554	7,499	68,963	18,328	20,910	26
SC	Resident	30,751	52,345	3,538	10,931	2,456	966	37
	Nonresident	102,876	172,889	12,718	39,881	6,458	2,580	31
	Comped	1,374	2,044	232	501	102	53	0
	Crew	1,781	1,281	46	230	34	7	0
	Unknown	391	605	32	138	19	16	0
	Total	137,173	229,164	16,566	51,681	9,069	3,622	68
Total	Resident	32,461	54,164	3,699	11,677	2,721	1,254	37
	Nonresident	210,507	281,044	20,025	107,782	24,449	23,000	57
	Comped	1,516	2,171	239	538	118	83	0
	Crew	1,945	1,348	50	322	42	30	0
	Unknown	800	991	52	325	67	165	0
	Total	247,229	339,718	24,065	120,644	27,397	24,532	94

Note: Data are current as of 07/09/09.

[a] Region is based on the port of offloading, bottomfish statistical area and salmon statistical area.

[b] Angler days counts all anglers who fished on a day when a bottomfish statistical area was entered plus any angler who harvested a bottomfish regardless of whether a bottomfish statistical area was provided.

Table 17.–Freshwater effort and harvest by region, 2006.

Region[a]	Type of Angler	Angler Days	Number Kept							
			King	Coho	Sockeye	Cutthroat	Rainbow	Steelhead	Grayling	Dolly Varden
SE	Resident	106	4	41	30	3	0	0	0	2
	Nonresident	10,970	174	6,849	2,132	109	19	4	25	621
	Crew	179	15	103	91	1	0	0	0	1
	Unknown	209	0	178	21	0	0	0	0	7
	Total	11,464	193	7,171	2,274	113	19	4	25	631
SC	Resident	9,742	2,529	2,467	1,145	0	73	1	0	153
	Nonresident	111,956	20,988	40,480	26,207	6	1426	19	321	1961
	Crew	2,123	55	548	276	1	6	2	0	56
	Unknown	1,234	231	641	448	0	7	0	3	38
	Total	125,055	23,803	44,136	28,076	7	1,512	22	324	2,208
AYK	Resident	883	389	77	255	0	4	0	23	45
	Nonresident	9,573	1,786	3,277	1,013	0	23	0	184	535
	Crew	291	7	5	55	0	0	0	0	14
	Unknown	141	16	79	30	0	0	0	3	0
	Total	10,888	2,198	3,438	1,353	0	27	0	210	594
Total	Resident	10,731	2,922	2,585	1,430	3	77	1	23	200
	Nonresident	132,499	22,948	50,606	29,352	115	1,468	23	530	3,117
	Crew	2,593	77	656	422	2	6	2	0	71
	Unknown	1,584	247	898	499	0	7	0	6	45
	Total	147,407	26,194	54,745	31,703	120	1,558	26	559	3,433

Note: Data are current as of 07/10/09.

[a] Region is based on the SWHS area listed as the first character in the site code.

Table 18.–Freshwater effort and harvest by region, 2007.

Region[a]	Type of Angler	Angler Days	Number Kept										
			King	Coho	Sockeye	Cutthroat	Rainbow	Steelhead	Lake Trout	Grayling	Dolly Varden	Pike	Sheefish
SE	Resident	300	15	205	41	4	0	0	0	0	1	0	0
	Nonresident	11,156	102	6,817	1,979	86	21	27	0	0	1598	0	0
	Comped	44	0	26	28	0	0	0	0	0	0	0	0
	Crew	117	3	105	27	1	0	0	0	0	0	0	0
	Unknown	54	2	25	5	0	0	0	0	0	1	0	0
	Total	11,671	122	7,178	2,080	91	21	27	0	0	1,600	0	0
SC	Resident	11,278	2,429	2,902	1,715	0	198	0	6	4	157	25	0
	Nonresident	112,358	18,675	36,019	35,189	22	2526	62	128	631	3621	147	2
	Comped	572	86	46	107	0	24	0	0	2	69	18	0
	Crew	1,296	52	237	460	1	51	0	0	7	38	4	0
	Unknown	883	131	220	274	0	26	0	0	0	63	2	0
	Total	126,387	21,373	39,424	37,745	23	2,825	62	134	644	3,948	196	2
AYK	Resident	928	426	38	216	0	5	0	2	52	38	40	1
	Nonresident	11,006	1,812	2,660	1,133	0	200	0	10	333	433	101	16
	Comped	125	47	39	20	0	1	0	0	20	17	117	0
	Crew	169	21	35	35	0	24	0	0	3	16	7	0
	Unknown	34	12	0	1	0	1	0	0	6	0	0	0
	Total	12,262	2,318	2,772	1,405	0	231	0	12	414	504	265	17
Total	Resident	12,506	2,870	3,145	1,972	4	203	0	8	56	196	65	1
	Nonresident	134,520	20,589	45,496	38,301	108	2,747	89	138	964	5,652	248	18
	Comped	741	133	111	155	0	25	0	0	22	86	135	0
	Crew	1,582	76	377	522	2	75	0	0	10	54	11	0
	Unknown	971	145	245	280	0	27	0	0	6	64	2	0
	Total	150,320	23,813	49,374	41,230	114	3,077	89	146	1,058	6,052	461	19

Note: Data are current as of 07/10/09.

[a] Region is based on the SWHS area listed as the first character in the site code.

Table 19.–Freshwater effort and harvest by region, 2008.

Region[a]	Type of Angler	Angler Days	Number Kept										
			King	Coho	Sockeye	Cutthroat	Rainbow	Steelhead	Lake Trout	Grayling	Dolly Varden	Pike	Sheefish
SE	Resident	320	16	136	11	5	0	1	0	1	4	0	0
	Nonresident	10,143	69	5,686	1,069	20	7	1	0	0	586	0	0
	Comped	19	0	10	1	0	0	0	0	0	3	0	0
	Crew	197	7	94	4	0	0	0	0	0	4	0	0
	Unknown	51	0	5	2	0	0	0	0	0	5	0	0
	Total	10,730	92	5,931	1,087	25	7	2	0	1	602	0	0
SC	Resident	11,059	2,096	3,388	1,459	0	55	0	3	4	143	179	0
	Nonresident	113,089	16,967	47,724	30,937	0	614	9	159	254	1925	290	1
	Comped	299	38	97	59	0	0	0	0	0	12	3	0
	Crew	1,306	36	344	143	0	3	0	1	1	44	24	0
	Unknown	843	175	243	208	0	2	0	1	0	9	0	0
	Total	126,596	19,312	51,796	32,806	0	674	9	164	259	2,133	496	1
AYK	Resident	860	285	45	46	0	11	0	2	17	14	17	6
	Nonresident	10,828	1,569	2,676	573	0	57	2	3	61	404	52	54
	Comped	7	3	12	2	0	0	0	0	0	3	0	0
	Crew	112	8	30	26	0	10	0	0	5	10	0	0
	Unknown	26	5	0	1	0	0	0	0	0	0	0	0
	Total	11,833	1,870	2,763	648	0	78	2	5	83	431	69	60
Total	Resident	12,239	2,397	3,569	1,516	5	66	1	5	22	161	196	6
	Nonresident	134,060	18,605	56,086	32,579	20	678	12	162	315	2,915	342	55
	Comped	325	41	119	62	0	0	0	0	0	18	3	0
	Crew	1,615	51	468	173	0	13	0	1	6	58	24	0
	Unknown	920	180	248	211	0	2	0	1	0	14	0	0
	Total	149,159	21,274	60,490	34,541	25	759	13	169	343	3,166	565	61

Note: Data are current as of 07/10/09.

[a] Region is based on the SWHS area listed as the first character in the site code.

DISCUSSION

GUIDE AND BUSINESS LICENSING

The 2006 through 2008 ADF&G guide and business licensing process differed from the registration process prior to 2005 in terms of the approach used, fees, and the information collected on license applications. The current licensing approach reflects changes made in 2005 to reflect the new minimum requirements established by HB 452. Guides and businesses offering guided fishing services are now held to a higher standard of compliance than previous to 2005. Violations of the guide licensing statutes or regulations adopted under HB 452 are either violations or misdemeanors, and courts are authorized to revoke the license of the guide or business under certain conditions, such as repeated convictions within a three-year period.

ADF&G no longer collects the information collected in earlier years on the type (saltwater vs. freshwater) and location (regions/subareas) of services. The 2006-2008 licensing processes have been similar and provide a basis for establishing a long-term database of licensed businesses and guides. Charter/guide business and guide licensing still reflects the intent to operate, while actual activity is confirmed by the submission of logbook trip data.

LOGBOOKS

ADF&G initiated a mandatory saltwater charter logbook program in 1998. The BOF adopted regulations requiring annual registration of sport fishing guides and businesses, and logbook reporting. The logbook and registration/licensing program was intended to provide information on actual participation and harvest by individual vessels and businesses.

Recent emphasis from ADF&G management staff and NPFMC on more timely saltwater data spurred discussions on how to hasten logbook data availability. Currently, logbook data entry involves collecting logbook sheets from the guide, entering the logbook data into a logbook database, and editing the data. This process can take RTS from six to eight weeks. Discussions included the possibility of an electronic submission option that would provide data to ADF&G and NPFMC staff in a more timely manner. Any option for a logbook change would have to include a design that is appealing and easy for the guide industry to use, such that they would perceive it as beneficial to a process that they already consider "burdensome." Electronic reporting options were, at first, appealing to fulfill both management needs and halibut management needs for more timely information. Further discussions concluded that electronic reporting would still necessitate the use of a paper version of the logbook due to enforcement and trip recording requirements. Data would still need to be verified for errors, be entered accurately into a database, and be available for onsite inspection. There are currently no options for going "paperless", and no perceived benefit to managers or the industry that would result from the process. The "paperless" approach would require a change in regulation for reporting requirements along with extensive research into the cost of electronic reporting. The discussion for going "paperless" will continue however.

Upon further discussion and research, an alternative approach was considered. ADF&G programmers researched the option of developing a system that would electronically scan the image of a redesigned logbook data page. Scanned images would minimize data entry time but allow for data entry personnel to fix images flagged as unrecognizable, thus maintaining data accuracy and quality. This option is not any more "burdensome" to the industry and would

likely make the weekly reporting requirement more palatable knowing that the data would be more immediately available.

In 2010, a field test of the redesigned saltwater logbooks will be conducted to test the new scannable saltwater logbook data page and scanning software. Upon review of the test data pages and likely adjustments to the design, it is hoped that this new design will be fully adopted and implemented by 2011.

Preliminary results from verification studies comparing the accuracy of logbook harvest data with the statewide harvest survey estimates, and onsite creel programs are favorable. Logbook data will continue to be compared to counts from those two programs. Comparisons are ongoing and are part of a more comprehensive evaluation of logbook data quality. Logbook halibut data has been used extensively. Saltwater and freshwater logbook data have also been used for a variety of regulatory analyses for state managed species.

ACKNOWLEDGEMENTS

Southeast and Southcentral regional and area staff, especially numerous front counter personnel, have been critical to the success of the ADF&G sport fishing guide and business licensing and logbook program. The above staff along with Rob Bentz, Bob Chadwick and Mike Jaenicke from Southeast, Scott Meyer, Matt Miller and Tom Vania from Southcentral, and Tom Taube from Fairbanks have also provided valuable comments during the process of registration and logbook form design.

Doug Vincent-Lang has provided valuable insight on the history of the program and facilitated numerous discussions with NOAA and IPHC. Bob Clark's thoughtful insight and direction has been very much appreciated. We also acknowledge the expertise and infinite patience exhibited by Joanne MacClellan in preparing this report. Her knowledge and willingness to assist is invaluable.

Kirk Brogdon of the division's Research and Technical Services section deserves considerable credit for designing and implementing efficient information management systems for data capture, cleaning, storage, and reporting. These systems, accessible via the division's Intranet, allowed area staff statewide to query the most up-to-date registration and logbook databases via their Internet browser.

Kathy Kush should be acknowledged for her incredible skills in streamlining the licensing process and making sure that all license applications are processed in a timely manner that has allowed the guides and businesses to start operation without delay.

Margaret Nussbaum, Diane Novinska, Jennifer Bond, Mary Yanagawa and several seasonal technicians deserve credit for receiving, entering, and filing the licensing and logbooks forms. With their perseverance, we met reporting deadlines that seemed nearly impossible with available staffing and workloads.

We also acknowledge the cooperation of the thousands of sport fishing guides and sport fishing businesses that licensed and completed their logbooks in a timely and compliant manner.

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APPENDIX A
SPORT FISH BUSINESS OWNER/GUIDE LICENSE APPLICATION

2006 SPORT FISH BUSINESS OWNER/GUIDE LICENSE

License #

Alaska Department of Fish and Game / Division of Sport Fish - RTS
333 Raspberry Road, Anchorage, Alaska 99518-1599
Telephone: (907) 267-2369 or (907) 267-2390
http://www.sf.adfg.state.ak.us/statewide/Guides/guide.cfm

FEES (CHECK ONE):

- ☐ $ 50.00 Guide License only
- ☐ $100.00 Business Owner License only
- ☐ $100.00 Combined Business Owner/Guide License

METHOD OF PAYMENT:

- ☐ Check #: _____
- ☐ Money Order #: _____
- ☐ Cash *(Anchorage, Juneau and Fairbanks offices ONLY)*
- ☐ Credit Card *(Anchorage, Juneau and Fairbanks offices ONLY or Internet)*

LICENSE MUST BE STAMPED BY ADF&G TO BE VALID

Make checks payable to: State of Alaska All fees are nonrefundable. Allow 10-14 days for processing

SEE REVERSE FOR INSTRUCTIONS

SECTION A. TO BE FILLED OUT BY ALL APPLICANTS.

Name of Business Owner or Guide: _____ (Last) _____ (First) _____ (M.I.)
Permanent Mailing Address: _____ (City) _____ (State) _____ (Zip)
Telephone Number: ( ) _____ In-season Telephone Number: ( ) _____
e-mail address if available: _____

SECTION B. TO BE FILLED OUT BY THE BUSINESS OWNER OR THEIR AGENT.

BUSINESS INFORMATION:
Name of Business: _____
Name of Business Owner: _____
State of Alaska Occupational Business License Number: _____ Expiration Date: _____
INSURANCE: *See detailed insurance requirements on back.*
Name of Insurance Company: _____
Policy/Binder #: _____ Effective Dates: From: _____ To: _____
Remember to get a logbook for your business at the nearest ADF&G office prior to commencement of guiding activities.

SECTION C. TO BE FILLED OUT BY THE GUIDE OR THEIR AGENT.

Are you a citizen of the United States, Canada, Mexico or a resident alien? Yes ☐ No ☐
Current First Aid card: Certifying agency: _____ Exp. Date: Mo:____Yr: ____
2006 Alaska Sport Fishing License # (not your Guide License #): _____
U.S. COAST GUARD OPERATOR'S LICENSE: *(See explanation on back)*
Do you plan to operate a motorized vessel in Navigable Waters? Yes ☐ No ☐ **If yes,** complete the next line.
U. S. Coast Guard Operator's License #: _____ Expiration Date: _____

SIGNATURE OF BUSINESS OWNER/AGENT or GUIDE:
I hereby certify that all information is true and correct and that I understand this information is subject to public disclosure.
X _____ **Circle one:** Applicant or Agent **Date:** _____

This temporary license application, must be signed and stamped by an ADF&G employee and in your possession before guiding activities begin. Keep this temporary license while operating until your permanet wallet-sized card arrives. Allow 10-14 days.

Name of ADF&G Representative *(print)*: _____ Place of Issue: _____
Signature: _____ Date: _____

Appendix A1.–Sport fish business owner/guide license application, 2006.

2007 SPORT FISH BUSINESS OWNER/GUIDE LICENSE

License #

Alaska Department of Fish and Game / Division of Sport Fish - RTS
333 Raspberry Road, Anchorage, Alaska 99518-1599
Telephone: (907) 267-2369 or (907) 267-2390
http://www.sf.adfg.state.ak.us/statewide/Guides/guide.cfm

CHECK ONE: **All fees are nonrefundable**

- ☐ $50.00 Guide Only License
- ☐ $100.00 Business Only License
- ☐ $100.00 Combined Business/Guide License
- ☐ $50.00 Guide Only Upgrade to Combination Business/Guide License

METHOD OF PAYMENT:

- ☐ Check # : _____ Make checks payable to State of Alaska
- ☐ Money Order #: _____
- ☐ Cash *(Anchorage, Juneau, Fairbanks offices ONLY)*
- ☐ Credit Card *(Anchorage, Juneau, Fairbanks offices ONLY or Internet)*

LICENSE MUST BE STAMPED BY ADF&G TO BE VALID

This is a temporary license good for 14 business days after date signed by Dept Representative

SEE REVERSE FOR INSTRUCTIONS

SECTION A. TO BE FILLED OUT BY ALL APPLICANTS.

Name of Business Owner or Guide: _____ (Last) _____ (First) _____ (M.I.)
Permanent Mailing Address : _____ (City) _____ (State) _____ (Zip)
Telephone Number: (___) _____ In-season Telephone Number: (___) _____
e-mail address if available: _____

SECTION B. TO BE FILLED OUT BY THE BUSINESS OWNER OR THEIR AGENT.

BUSINESS INFORMATION:
Name of Business: _____
Name of Business Owner: _____
Alaska Div. of Occupational Business License Number: _____ Expiration Date: _____
INSURANCE: *See detailed insurance requirements on back.*
Name of Insurance Company: _____
Policy/Binder #: _____ Effective Dates: From: _____ To: _____
Remember to get a logbook for your business at the nearest ADF&G office prior to commencement of guiding activities.

SECTION C. TO BE FILLED OUT BY THE GUIDE OR THEIR AGENT.

Are you a citizen of the United States, Canada, Mexico or a resident alien? Yes ☐ No ☐
Current First Aid card: Certifying agency: _____ Exp. Date: Mo: ____ Yr: ____
2007 Alaska Sport Fishing License # (not your Guide License #): _____
U.S. COAST GUARD OPERATOR'S LICENSE: *(See explanation on back)*
Do you plan to operate a motorized vessel in Navigable Waters? Yes ☐ No ☐ **If yes**, complete the next line.
U. S. Coast Guard Operator's License #: _____ Expiration Date: _____

SIGNATURE OF BUSINESS OWNER/AGENT or GUIDE:
I hereby certify that all information is true and correct and that I understand this information is subject to public disclosure.
X _____ **Circle one:** Applicant or Agent **Date:** _____

This temporary license must be signed and stamped by an ADF&G employee and in your possession before guiding activities begin. Keep this temporary license while operating until your permanet wallet-sized card arrives. Allow up to 14 business days.

Name of ADF&G Representative *(print)*: _____ Place of Issue: _____
Signature: _____ Date: _____

Appendix A2.–Sport fish business owner/guide license application, 2007.

2008 SPORT FISH BUSINESS OWNER/ GUIDE LICENSE APPLICATION

Alaska Department of Fish and Game / Division of Sport Fish - RTS
333 Raspberry Road, Anchorage, Alaska 99518-1599
Telephone: (907) 267-2369 or (907) 267-2390
http://www.sf.adfg.state.ak.us/statewide/Guides/guide.cfm

License #

This TEMPORARY LICENSE is good for 21 business days after date signed by Dept. Representative

CHECK ONE: (Complete Sections)

- ☐ $50.00 Guide Only License (A&C)
- ☐ $100.00 Business Only License (A&B)
- ☐ $100.00 Combined Business/Guide License (AB&C)

An agent for this business cannot apply as a guide on a combination license

All fees are nonrefundable

☐ $50.00 Guide Only Upgrade to Combination Business/Guide License

METHOD OF PAYMENT:

- ☐ Check # : _____ *Make checks payable to State of Alaska*
- ☐ Money Order #: _____
- ☐ Cash *(Anchorage, Juneau, Fairbanks offices ONLY)*
- ☐ Credit Card *(Anchorage, Juneau, Fairbanks offices ONLY or Internet)*

APPLICATION MUST BE STAMPED BY ADF&G TO BE VALID

SEE REVERSE FOR INSTRUCTIONS

SECTION A. ALL APPLICANTS COMPLETE THIS SECTION.

Name of Business Owner or Guide: _____ (Last / First / MI)

Permanent Mailing Address : _____ (City / State / Zip)

Telephone Number: (___) _____ In-season Telephone Number: (___) _____

Mail the 2008 License Here *(if different)*: _____ (City / State / Zip)

SECTION B. TO BE FILLED OUT BY THE BUSINESS OWNER OR THEIR AGENT.

BUSINESS INFORMATION:

Name of Business: _____

Name of Business Owner: _____

Alaska Div. of Occupational Business License Number: _____ Expiration Date: *Mo/Date/Yr*

INSURANCE: ***See detailed insurance requirements on back.***

Name of Insurance Company: _____

Policy/Binder #: _____ Effective Dates: From: _____ To: _____

Remember to get a logbook for your business at the nearest ADF&G office prior to commencement of guiding activities.

TEMPORARY LICENSE ONLY

SECTION C. TO BE FILLED OUT BY THE GUIDE OR THEIR AGENT.

Are you a citizen of the United States, Canada, Mexico or a resident alien? Yes ☐ No ☐

Current First Aid card: Certifying agency: _____ Exp. Date: *Mo / Yr*

2008 Alaska Sport Fishing License # (not your Guide License #): _____

U.S. COAST GUARD OPERATOR'S LICENSE: ***(See explanation on back)***

Do you plan to operate a motorized vessel in Navigable Waters? Yes ☐ No ☐ **If yes**, complete the next line.

U. S. Coast Guard Operator's License #: _____ Exp.Date: *Mo/Date/Yr* DOB: *Mo/Date/Yr*

SIGNATURE OF BUSINESS OWNER/AGENT or GUIDE:

I hereby certify that all information is true and correct and that I understand this information is subject to public disclosure. (NOTE: Making a false statement or omitting a material fact, is subject to a maximum penalty of $10,000 or 1 year imprisonment, or both, per AS 11.56.210.)

X _____ **Circle one:** Applicant or Agent **Date:** _____

This temporary license must be signed and stamped by an ADF&G employee and in your possession before guiding activities begin.

Name of ADF&G Representative *(print)*: _____ **Place of Issue:** _____

Signature: _____ **Date:** _____

Appendix A3.–Sport fish business owner/guide license application, 2008.

-continued-

INSTRUCTIONS FOR THE 2008 SPORT FISH BUSINESS OWNER/ GUIDE LICENSE APPLICATION

Attention: *The following will apply without exception:*

1. **All applicable sections of the license application must be complete and legible prior to ADF&G validation. No "pending", "unknowns," or blanks will be accepted.**
2. **Incomplete license applications will be returned, resulting in a processing delay.**
3. **A signature is required.**
4. **This is a license application only. A *permanent* license will be mailed within 21 business days.**
5. **There may be requirements by other state and federal agencies to operate as a guide in Alaska.**

INSTRUCTIONS:

SECTION A: ALL applicants must complete this section.

SECTION B: BUSINESS OWNER OR THEIR AGENT - Complete this section if you are the owner/agent of the sport fishing business. This section should be filled out even if the owner does not intend to personally guide clients. An agent for this business **CANNOT** apply as a guide on the same application. A seperate license application must be submitted.

LIABILITY INSURANCE REQUIREMENT: General liability or marine protection that covers at least $100,000 for each incident and $300,000 for all incidents in a year. Insurance must cover **ALL** periods of time when the owner or owner's employees are providing sport fishing services to clients. Insurance must be current, **NOT** pending.

IMPORTANT NOTICE TO BUSINESS OWNERS

State regulation (5 AAC 75.075) requires that all operators providing sport fishing guide services in Alaska must apply annually for a license with the Department of Fish and Game **before** guiding services begin. Business owners are required to register all charter vessels with ADF&G and acquire a logbook prior to commencement of guiding activities. ***Guides hired by an operator must keep a copy of the business license in their possession while guiding.***

SECTION C: GUIDES - Complete this section if you intend to guide for a sport fish operation owned by someone other than you or if you are the business owner who also intends to guide (owner/operator).

U.S. COAST GUARD OPERATOR'S LICENSE: A licensed sport fish guide must have, at minimum, an OUPV or 6-pak U.S.C.G. operator's license in their possession while operating a motorized vessel with clients or transporting clients on a motorized vessel in navigable waters. Navigable waters are determined by the U.S. Coast Guard. Applicant must provide the U.S.C.G. license number, expiration date and date of birth (DOB).

IMPORTANT NOTICE TO GUIDES

State regulation (5 AAC 75.075) requires that all licensed guides providing sport fishing guide services in Alaska must apply annually for a license with the Department of Fish and Game ***before*** guiding activities begin.

WHAT A GUIDE MUST HAVE IN POSSESSION WHILE GUIDING

A sport fish business owner or guide should be able to present all documents required for licensing upon request by a representative of the department of fish and game, or any peace officer of the state. While engaged in providing sport fishing guide services, a sport fishing guide shall have the following readily available for inspection:

- A current sport fishing guide license;
- A copy of the current ADF&G sport fishing business license of the guide's employer;
- A current Alaska sport fishing license, tags, stamps or permits that are required to engage in the sport fishery for which the guide services are providing;
- An identification card issued to the sport fishing guide by a state or federal agency that bears a photo of the sport fishing guide.

Appendix A3.–Page 2 of 2.

APPENDIX B
VESSEL REGISTRATION FORMS, DECALS AND TAGS

ADF&G REPRESENTATIVE:

DO NOT ISSUE A LOGBOOK UNLESS THE APPLICANT HAS THE FOLLOWING:

- 2008 ADF&G Sport Fish Business and Guide License
- Current AK Vessel Number issued by DMV or Current U.S.C.G. Vessel Documentation No.

NONE OF THE ABOVE CAN BE "PENDING"

A logbook issued without the above items will result in a processing delay and a return of the sign-out sheet to the issuing office for your completion and follow-up. Subsequent data sheets will NOT be processed until the information is complete.

2008 ADF&G Sport Fish Business Owner and Guide License applications are available at all ADF&G offices or online at:

http://www.admin.adfg.state.ak.us/license/

AK Vessel Registration # is available from Alaska Div. of Motor Vehicles at (907)269-5551 or online at:

http://www.state.ak.us/local/akpages/ADMIN/dmv/reg/boat.htm

State of Alaska, Department of Fish & Game
Division of Sport Fish - RTS
333 Raspberry Rd.
Anchorage, AK 99518

2008 Saltwater Sport Fish Charter Logbook Sign-Out AND Vessel Registration

Must be completed

INSTRUCTIONS TO ADF&G REPRESENTATIVE: Please forward the white copy of this form to **Sport Fish Research & Technical Services, 333 Raspberry Rd., Anchorage, AK 99518.** ADF&G area offices should keep the pink copy.

SPORT FISH BUSINESS INFORMATION:

Name of Sport Fishing Business: _____

Sport Fish Business Owner License Number (avail. from ADF&G): 08- _____

(A logbook WILL NOT be issued without a current ADF&G Business License Number)

SPORT FISHING CHARTER VESSEL REGISTRATION:

DMV issued AK No. or Vessel U.S.C.G. Documentation No. *(REQUIRED)*: _____

(A logbook WILL NOT be issued without a current AK or U.S.C.G. number)

Vessel Name: _____ *(Put vessel name and AK No. or U.S.C.G. # on cover also)*

Primary Alaska port from which this vessel will operate during 2008: _____

DEPARTMENT USE ONLY

Did you issue a Stat. Area Map? YES ☐ NO ☐ **If No, Explain:**

ADF&G Representative: *(print)* _____

Area Office: _____ **Date of Issue:** _____

ii

Appendix B1.–Saltwater sport fish charter logbook sign-out and vessel registration form, 2008.

LOGBOOK NO.

2008 FRESHWATER SPORT FISH GUIDE
Vessel Registration

NOTE TO ADF&G REPRESENTATIVE

Confirm that the vessel information requested on the bottom of this page is complete. Every vessel that this business is intending to operate while providing sport fishing guided services, must be recorded.

Attach the white (top) copy of this page to the sign-out sheet, whether or not there are registered vessels. Mail the sign-out sheet and the vessel registration page to the Anchorage ADF&G RTS office.

REGISTERING YOUR VESSEL(S)

For each vessel you plan to use to conduct sport fishing guided activities, please fill out the information below.

If a vessel is newly purchased, leased or borrowed at anytime during the guiding season, it must have a current AK Number. or a U.S.C.G. documentation number. If a vessel is added midseason, add it to the (pink) portion of this page and turn it in with your final logbook data sheet.

For purposes of vessel registration, vessels are defined as: **rafts, canoes, motorized and nonmotorized water vehicles.**

Single person float tubes are exempt from registration.

See page iv for detailed information on vessel registration.

VESSEL AK # (DMV) OR U.S.C.G. VESSEL DOCUMENTATION NO.	PRIMARY AK DRAINAGE/COMMUNITY THE VESSEL WILL OPERATE OUT OF IN 2008

Continue on another sheet if you have more vessels. Transfer the business name and logbook number onto that extra sheet.

Appendix B2.–Freshwater sport fish guide vessel registration form, 2008.



Appendix B3.–Vessel decal, 2006-2008.



Appendix B4.–Vessel tab, 2008.

APPENDIX C
SALTWATER LOGBOOK FORMS

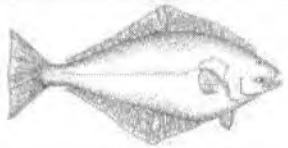
State of Alaska
Department of Fish & Game
Division of Sport Fish

2006 Saltwater Charter Logbook and Vessel Registration

Vessel Name:

Vessel AK. or U.S.C.G. #

Please read the INSTRUCTIONS carefully as reporting requirements have changed.



LOGBOOK INSPECTION

Upon request from any representative of the department or any peace officer of the state, a person is required to present the Alaska Department of Fish and Game Saltwater Sportfishing Charter Vessel Logbook for inspection.

Appendix C1.–Saltwater charter logbook form, 2006.

-continued-

ALASKA DEPARTMENT OF FISH & GAME SALTWATER SPORT FISHING CHARTER TRIP LOGBOOK. LOGBOOK NO:

333 RASPBERRY RD., ANCHORAGE, ALASKA 99518. QUESTIONS: CALL (907) 267-2369.

COMPLETE THIS SECTION FOR EVERY TRIP

INSTRUCTIONS: Complete one row below for each client and crew who fished on this trip.

BUSINESS AND VESSEL INFORMATION

⇨ 2006 ADF&G BUSINESS OWNER LICENSE #: _____
(License # assigned to you by ADF&G).

⇨ 2006 ADF&G GUIDE LICENSE #: _____
(If same as Business Owner license #, write down same #).

⇨ VESSEL AK. OR U.S.C.G #: _____

TRIP INFORMATION

⇨ DATE OF OFF-LOADING: MO: _____ DAY: _____ , 2006.
(Date that fish or clients were offloaded from vessel).

⇨ PORT OR SITE OF OFF-LOADING: _____
(Port or Site where fish or clients were off-loaded from vessel).

⇨ TOTAL NO. CLIENTS ON THE VESSEL: _____
(Include those that did not fish).

⇨ PRIMARY STAT AREA, NO. OF RODS FISHED & BOAT HOURS:

Targeted Species	Primary Stat. Area where most fish were caught. (6-digit Code)	Max. no. of Rods Fished	No. of Boat Hours Fished this Trip
Salmon			
Bottomfish			

⇨ DAY NO. _____ OF _____ . (NO. OF CALENDAR DAYS FOR A MULTI-DAY TRIP).

⇨ PAGE NO. _____ OF _____ . (TOTAL NO. OF PAGES FOR THIS TRIP).

RETURN LOGBOOK REPORTS WEEKLY

⇨ LOGBOOK TRIP REPORTS MUST BE COMPLETED AFTER EACH TRIP BEFORE OFF-LOADING ANY CLIENTS OR FISH. (SEE PG. ## FOR NO DOCKING FACILITIES)

⇨ RETURN COMPLETED TRIP SHEETS PER THE WEEKLY SCHEDULE PRINTED ON THE INSIDE OF THE FRONT COVER .

⇨ LOGBOOK TRIP SHEETS MUST BE RECIEVED BY ADF&G OFFICES OR POSTMARKED BY THE DATE SPECIFIED ON THE SCHEDULE WITHIN THIS LOGBOOK.

INDIVIDUAL ANGLER AND CATCH INFORMATION

Sport Fishing License Number of each Client and Crew Fishing OR Record those anglers under 16 as "Youth Angler"(#1, #2 etc.)	Circle next to each license if Resident, Nonresident or Crew	Number of King Salmon 28" and Larger		Number of King Salmon "Shakers" Less Than 28"		Number of Other Salmon Coho		Number of Other Salmon Sockeye	Number of Other Salmon Pink	Number of Other Salmon Chum	Number of Halibut		Number of Lingcod		Number of Pelagic Rockfish (black bass, etc.)		Number of Yelloweye Rockfish		Number of Nonpelagic Rockfish (not including Yelloweye)		Number of Salmon Shark		All Other Fish (optional)
		Kept	Rele	Kept	Rele	Kept	Rele	Kept	Kept	Kept	Kept	Rele	Kept	Rele	Kept	Rele	Kept	Rele	Kept	Rele	Kept	Rele	Kept
		Salmon									Bottomfish												
	R N C																						
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CERTIFICATION: I certify that the information contained in this document is true and correct to the best of my knowledge. X GUIDE SIGNATURE

CONTINUE ON NEXT PAGE IF MORE ANGLERS OR TRIPS.

1

Form 11-540 (01-2006)

39

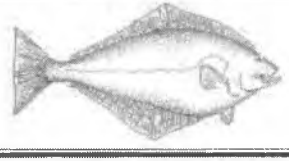
Appendix C1.–Page 2 of 2.

State of Alaska
Department of Fish & Game
Division of Sport Fish

2007 Saltwater Charter Logbook and Vessel Registration

Vessel Name: (THIS LOGBOOK MUST REMAIN WITH THIS VESSEL)	***AND***	*Vessel AK. or U.S.C.G. #:*

Please follow the INSTRUCTIONS carefully as they have changed.



LOGBOOK INSPECTION

Upon request from any representative of the department or any peace officer of the state, a person is required to present this Alaska Department of Fish and Game Saltwater Sportfishing Charter Vessel Logbook for inspection.

Appendix C2.–Saltwater charter logbook form, 2007.

-continued-

ALASKA DEPARTMENT OF FISH & GAME SALTWATER SPORT FISHING CHARTER TRIP LOGBOOK. **LOGBOOK NO:**
333 RASPBERRY RD., ANCHORAGE, ALASKA 99518. QUESTIONS: CALL (907) 267-2369.

COMPLETE THIS SECTION FOR EVERY TRIP

BUSINESS AND VESSEL INFORMATION

⇨ 2007 FISH & GAME BUSINESS OWNER LICENSE #: _____
(License # assigned to you by ADF&G).

⇨ 2007 FISH & GAME GUIDE LICENSE #: _____
(If same as Business Owner license #, write down same #).

TRIP INFORMATION

⇨ DATE FISHED: MO: _____ DAY: _____ , 2007.

⇨ PORT OR COMMUNITY OF OFF-LOADING: _____
(Port or Community where fish or clients were off-loaded from vessel).

⇨ TOTAL NO. PAYING CLIENTS ON THE VESSEL: _____
(Include all paying hosts, even those that did not fish and those who accompanied and fished).
(DO NOT include "comped" anglers and crew members that fished).

⇨ PRIMARY STAT AREA & BOAT HOURS:

Targeted Species	Primary Stat. Area where most fish were caught. (6-digit Code)	No. of Boat Hours Fished this Trip
Salmon		
Bottomfish		

⇨ PAGE NO. _____ OF _____ . (TOTAL NO. OF PAGES FOR THIS TRIP)

RETURN LOGBOOK REPORTS WEEKLY

⇨ RETURN COMPLETED TRIP SHEETS PER THE WEEKLY SCHEDULE PRINTED ON THE INSIDE OF THE FRONT COVER.

⇨ LOGBOOK TRIP SHEETS MUST BE RECEIVED BY ADF&G OFFICES OR POSTMARKED BY THE DATE SPECIFIED ON THE SCHEDULE WITHIN THE INSIDE FRONT COVER THIS LOGBOOK.



Form 11-540 (01-2007)

INSTRUCTIONS: Complete one row below for each client, non paying angler, and crew, who fished on this trip.

INDIVIDUAL ANGLER AND CATCH INFORMATION

Sport Fishing License Number of each Client, Non Paying angler, and Crew THAT FISHED AND Record those anglers under 16 as "Youth Angler"(#1, #2 etc.)	Circle next to each License # Resident, Nonresident, X for "Comped" or Crew	Number of King Salmon: 28" and Larger (Kept / Rele)	Number of King Salmon: "Shakers" Less Than 28" (Kept / Rele)	Number of Other Salmon: Coho (Kept / Rele)	Number of Other Salmon: Sockeye (Kept)	Number of Other Salmon: Pink (Kept)	Number of Other Salmon: Chum (Kept)	Number of Halibut (Kept / Rele)	Number of Lingcod (Kept / Rele)	Number of Pelagic Rockfish (Kept / Rele)	Number of Yelloweye Rockfish (Kept / Rele)	Number of Nonpelagic Rockfish (Kept / Rele)	Number of Salmon Shark (Kept)	All Other Fish (Kept / Rele)
	R N X C													
	R N X C													
	R N X C													
	R N X C													
	R N X C													
	R N X C													
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	R N X C													
	R N X C													

CERTIFICATION: I certify that the information contained in this document is true and correct to the best of my knowledge. X (GUIDE SIGNATURE)

CONTINUE ON NEXT PAGE IF MORE THAN 12 ANGLERS.

1

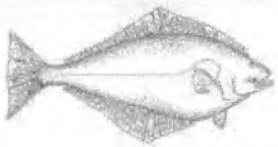
Appendix C2.–Page 2 of 2.

State of Alaska
Department of Fish & Game
Division of Sport Fish

2008 Saltwater Charter Logbook and Vessel Registration

Vessel Name: *(THIS LOGBOOK MUST REMAIN WITH THIS VESSEL)*	**AND**	***Vessel AK. #:*** ***or*** ***U.S.C.G. #:***

Please follow the INSTRUCTIONS carefully as they have changed.



LOGBOOK INSPECTION

Upon request from any representative of the Department or any peace officer of the state, a person is required to present this *Alaska Department of Fish and Game Saltwater Sportfishing Charter Vessel Logbook* for inspection.

Appendix C3.–Saltwater charter logbook form, 2008.

-continued-

ALASKA DEPARTMENT OF FISH & GAME 2008 SALTWATER SPORT FISHING CHARTER TRIP LOGBOOK.
333 RASPBERRY RD., ANCHORAGE, ALASKA 99518. QUESTIONS: CALL (907) 267-2369.

LOGBOOK NO:

COMPLETE THIS SECTION FOR EVERY TRIP

- 2008 FISH & GAME BUSINESS OWNER LICENSE #: _____ *(License # assigned to you by ADF&G).*
- 2008 FISH & GAME GUIDE LICENSE #: _____

TRIP INFORMATION

- DATE FISHED: MO: _____ DAY: _____, 2008.
- PORT OR COMMUNITY WHERE FISHING TRIP BEGAN: _____ *(Port or Community where clients were loaded and trip began)*
- PORT OR COMMUNITY OF OFF-LOADING: _____ *(Port or Community where fish or clients were off-loaded from vessel)*
- TOTAL NO. PAYING CLIENTS ON THE VESSEL: _____ *(Include ALL paying clients, even those that did not fish and those who did not catch anything) DO NOT include "comped" anglers and crew members that fished)*
- PRIMARY STAT AREA & BOAT HOURS:

Targeted Species	Primary Stat. Area where most fish were caught. (6-digit Code)	No. of Boat Hours Fished this Trip
Salmon		
Bottomfish		

COMPLETE THE FOLLOWING FOR ALL TRIPS

Circle the IPHC Area Fished if HALIBUT were Kept during this trip: 2C 3A 3B or 4 (Circle Only One)

If HALIBUT were kept in more than one IPHC area during this trip, a separate logbook data sheet must be used for each IPHC area fished.

- PAGE NO. _____ OF _____ (TOTAL NO. OF PAGES FOR THIS TRIP)

Form 11-540 (01-2008)

INSTRUCTIONS: Complete one row below for each angler who fished on this trip.

INDIVIDUAL ANGLER AND CATCH INFORMATION

Sport Fishing License Number AND printed name of each angler that fished OR Record those anglers under 16 by Birthdate (e.g., 8/28/1998) and First & Last Name.	Circle next to each License if Resident, Nonresident, X for "Comped" or Crew	Number of King Salmon: 28" and Larger Kept	Number of King Salmon: 28" and Larger Rele	Number of King Salmon: "Shakers" Less Than 28" Kept	Number of King Salmon: "Shakers" Less Than 28" Rele	Number of Other Salmon: Coho Kept	Number of Other Salmon: Coho Rele	Number of Other Salmon: Sockeye Kept	Number of Other Salmon: Pink Kept	Number of Other Salmon: Chum Kept	Number of Halibut: Y/O Kept (in 20__)	Number of Halibut Kept	Number of Halibut Rele	Number of Lingcod Kept	Number of Lingcod Rele	Number of Pelagic Rockfish (black bass, etc) Kept	Number of Pelagic Rockfish (black bass, etc) Rele	Number of Yelloweye Rockfish Kept	Number of Yelloweye Rockfish Rele	Number of Nonpelagic Rockfish (not including Yelloweye) Kept	Number of Nonpelagic Rockfish (not including Yelloweye) Rele	Number of Salmon Shark Kept	All Other Fish (optional)
		SALMON									BOTTOMFISH												
1. LICENSE NUMBER / ANGLER NAME	R N X C																						
2. LICENSE NUMBER / ANGLER NAME	R N X C																						
3. LICENSE NUMBER / ANGLER NAME	R N X C																						
4. LICENSE NUMBER / ANGLER NAME	R N X C																						
5. LICENSE NUMBER / ANGLER NAME	R N X C																						
6. LICENSE NUMBER / ANGLER NAME	R N X C																						
7. LICENSE NUMBER / ANGLER NAME	R N X C																						
8. LICENSE NUMBER / ANGLER NAME	R N X C																						

CERTIFICATION: I certify that the information contained in this document is true and correct to the best of my knowledge.

X GUIDE SIGNATURE

CONTINUE ON NEXT PAGE IF MORE THAN 8 ANGLERS.

CHECK IF TRIP INFORMATION IS CONTINUED ON NEXT PAGE: ☐

1

Appendix C3.–Page 2 of 2.

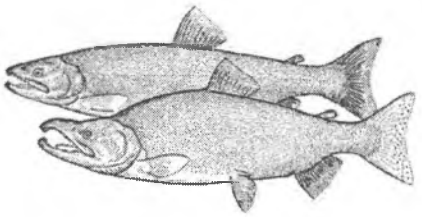
APPENDIX D
FRESHWATER LOGBOOK FORMS

2006 Freshwater Sport Fish Guide Logbook and Vessel Registration

LOGBOOK NO.

BUSINESS NAME

ADF&G BUSINESS LICENSE NO.



Please read the instructions carefully as reporting requirements have changed.

State of Alaska Department of Fish & Game
Division of Sport Fish

LOGBOOK INSPECTION

Upon request from any representative of the department or any peace officer of the state, a person is required to present the Alaska Department of Fish and Game Freshwater Sport Fish Guide Logbook for inspection.

Appendix D1.–Freshwater guide logbook form, 2006.

-continued-

Alaska Department of Fish & Game

Freshwater Sport Fish Trip Logbook

LOG BOOK #

333 RASPBERRY ROAD, ANCHORAGE, AK 99518 • QUESTIONS: (907) 267-2369

Logbook pages must be received at ADF&G offices (or postmarked) by the date specified on the inside cover.

RIVER / STREAM / LAKE (SPECIFY) _____ OF _____ TOTAL PAGES FOR THIS TRIP

SITE CODE _____ DATE _____

GUIDE LICENSE # _____ * WRITE-IN OTHER SPECIES HERE _____

SPORTFISH LICENSE #		SALMON			TROUT			OTHER		
List for each person fishing. Anglers under 16, enter as "Youth #1," etc.	KEPT / RELEASED	KING	COHO	SOCKEYE	CUTTHROAT	RAINBOW	STEELHEAD	A. GRAYLING	D. VARDEN	*
CIRCLE APPROPRIATE STATUS: NON-RESIDENT RESIDENT CREW										
N R C	K									
	R									
N R C	K									
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N R C	K									
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GUIDE SIGNATURE: I CERTIFY THIS DOCUMENT IS CORRECT TO THE BEST OF MY KNOWLEDGE.

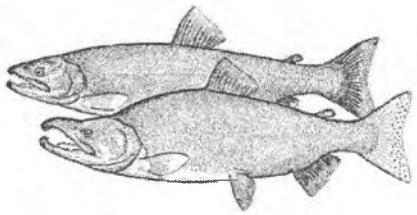
Appendix D1.–Page 2 of 2.

2007 Freshwater Sport Fish Guide Logbook and Vessel Registration

LOGBOOK NO.

BUSINESS NAME

ADF&G BUSINESS OWNER'S LICENSE NO.



Please follow the instructions carefully as they have changed.

State of Alaska Department of Fish & Game
Division of Sport Fish

LOGBOOK INSPECTION

Upon request from any representative of the department or any peace officer of the state, a person is required to present this Alaska Department of Fish and Game Freshwater Sport Fish Guide Logbook for inspection.

Appendix D2.–Freshwater guide logbook form, 2007.

-continued-

Alaska Department of Fish & Game

2007 Freshwater Sport Fish Trip Logbook

RETURN TO: 333 RASPBERRY ROAD, ANCHORAGE, AK 99518 • QUESTIONS: (907) 267-2369

LOGBOOK NO. _____

TRIP INFORMATION

ADF&G GUIDE LICENSE #: _____

DATE FISHED: _____ (Month) _____ (Day), 2007

_____
RIVER/STREAM/LAKE (SPECIFY)

_____
SITE CODE *(REFER TO SITE CODE LIST)*

PAGE NO. _____ OF _____
TOTAL NO OF PAGES FOR THIS TRIP

_____
* WRITE IN OTHER SPECIES HERE

Sport Fish License Number of each Client, Nonpaying angler, and Crew THAT FISHED AND Record all those anglers under 16 as "Youth Angler" (#1, #2 etc.)	Circle next to each License if Resident, Nonresident, X for "Comped" or Crew	KEPT / RELEASED	SALMON: KING	SALMON: COHO	SALMON: SOCKEYE	TROUT: CUTTHROAT	TROUT: RAINBOW	TROUT: STEELHEAD	TROUT: LAKE TROUT	OTHER: DOLLY VARDEN	OTHER: ARCTIC GRAYLING	OTHER: NORTHERN PIKE	OTHER: SHEEFISH	OTHER: *
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		R												
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	R N X C	K												
		R												

CERTIFICATION: I certify that the information contained in this document is true and correct to the best of my knowledge. X GUIDE SIGNATURE

CONTINUE ON NEXT PAGE IF MORE THAN 6 ANGLERS.

RETURN WHITE COPY TO ADF&G

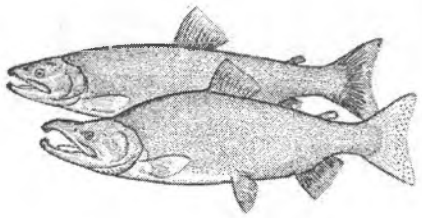
Appendix D2.–Page 2 of 2.

2008 Freshwater Sport Fish Guide Logbook and Vessel Registration

LOGBOOK NO.

BUSINESS NAME

ADF&G BUSINESS OWNER'S LICENSE NO.



Please follow the instructions carefully as they have changed.

State of Alaska Department of Fish & Game
Division of Sport Fish

LOGBOOK INSPECTION

Upon request from any representative of the Department or any peace officer of the state, a person is required to present this Alaska Department of Fish and Game Freshwater Sportfishing Guide Logbook for inspection.

Appendix D3.–Freshwater guide logbook form, 2008.

-continued-

Alaska Department of Fish & Game

2008 Freshwater Sport Fish Trip Logbook

RETURN TO: 333 RASPBERRY ROAD, ANCHORAGE, AK 99518 • QUESTIONS: (907) 267-2369

LOGBOOK NO. _____

TRIP INFORMATION

ADF&G GUIDE LICENSE #: _____

DATE FISHED: _____ (Month) _____ (Day), 2008

_____
RIVER / STREAM / LAKE (SPECIFY)

_____
SITE CODE *(REFER TO SITE CODE LIST)*

PAGE NO. _____ OF _____

TOTAL NO OF PAGES FOR THIS TRIP ↑

_____
* WRITE IN OTHER SPECIES HERE

Sport Fish License Number of each Client, Nonpaying angler, and Crew THAT FISHED AND Record all those anglers under 16 as "Youth Angler" (#1, #2 etc.)	Circle next to each License if Resident, Nonresident, X for "Comped" or C for Crew	KEPT / RELEASED	SALMON: KING	SALMON: COHO	SALMON: SOCKEYE	TROUT: CUTTHROAT	TROUT: RAINBOW	TROUT: STEELHEAD	TROUT: LAKE TROUT	OTHER: DOLLY VARDEN	OTHER: ARCTIC GRAYLING	OTHER: NORTHERN PIKE	OTHER: SHEEFISH	OTHER: *
	R N X C	K					KEPT							
		R					RELEASED							
	R N X C	K					KEPT							
		R					RELEASED							
	R N X C	K					KEPT							
		R					RELEASED							
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	R N X C	K					KEPT							
		R					RELEASED							

CERTIFICATION: I certify that the information contained in this document is true and correct to the best of my knowledge.

X _____ GUIDE SIGNATURE

CONTINUE ON NEXT PAGE IF MORE THAN 6 ANGLERS.

RETURN WHITE COPY TO ADF&G

Appendix D3.–Page 2 of 2.

APPENDIX E
ADF&G COMMISSIONER STATEMENT

Conceptual Strategies for Assuring the Accuracy of Reporting of Pacific Halibut Harvest for the 2006 ADF&G Saltwater Charter Logbook

The Alaska Department of Fish and Game is going to reinstate the reporting of Pacific halibut harvest in the Saltwater Charter Logbook program for 2006. The following conceptual ideas are currently being considered as implementation strategies to address the need for accurate reporting of the harvest of Pacific halibut by saltwater charters:

- Reporting of kept and released for Pacific halibut will be at the level of the individual chartered client (angler).
- Unique identification information for each client will be required and will be reported with the associated kept and released information for each fish species. One of the following identifiers will be used to identify each client and their trip characteristics: (1) ADF&G Sport Fishing License number; (2) Permanent Identification Card number; (3) Disabled Veterans License number; or (4) name for underage anglers (or possibly identified by accompanying adult's license number). Collecting this information will enable cross-verification (charter operator versus client) of logbook information (see next bullet).
- Off-site (cross-) verification will involve follow-up mail surveys of chartered anglers, using the identifying information provided in the logbook reports, combined with the ADF&G license databases.
- Mandatory recording of all information for each chartered trip before clients and harvest are offloaded at the end of the trip.
- Reporting (i.e., turning in charter logbook sheets) will occur on a weekly basis. Weekly reporting will enable timely feedback to charter operators regarding possible reporting errors and omissions, so for example incomplete and missing data in logbooks (e.g., statistical areas missing digits, port of landing missing, no effort information recorded, etc.) can then be addressed in a timely and accurate manner.
- Dock-side creel surveys will provide verification of the number of clients and numbers of Pacific halibut kept will occur for a random subsample of locations and charter trips for a yet-to-be determined portion of saltwater charter trips in Southeast and Southcentral Alaska. Verification will involve direct counting of clients upon offloading, and direct observation and counting of harvested halibut.
- Stricter penalties for logbook violations were implemented in 2004 when the legislature passed guide licensing and reporting provisions.

As noted above these ideas are conceptual in nature, and specific implementation details are under development and subject to change.

Appendix E1.–December 2005 ADF&G commissioner statement detailing strategies for reporting of Pacific halibut harvest for the saltwater charter logbook.

APPENDIX F
SALTWATER LOGBOOK SUMMARIES BY AREA AND PORT OF OFFLOADING

Appendix F1.–Saltwater logbook salmon participation, effort, kept and released by area and port of offloading, Southeast Alaska, 2006.

Area	Port of Offloading	Businesses[a]	Vessels[a]	Trips	Angler Days	King Salmon ≥ 28"		King Salmon < 28"		Coho		Sockeye	Pink	Chum
						Kept	Released	Kept	Released	Kept	Released	Kept	Kept	Kept
A	Cedars Lodge	8	8	44	183	82	18	2	17	131	1	0	46	16
A	Clover Pass	13	16	343	1,322	543	69	3	152	3,359	107	6	432	186
A	Ketchikan	67	84	3,466	15,069	3,125	339	243	2,163	7,067	452	65	6,981	447
A	Knudson Cove	21	27	1,542	6,508	1,024	124	40	1,244	2,094	51	44	1,837	145
A	Salmon Falls	4	12	320	1,077	223	68	5	409	1,484	34	12	729	55
A	Salmon Landing	4	18	554	2,037	33	6	5	26	44	5	2	407	11
A	Other	16	37	1,134	3,357	461	75	14	523	872	17	6	410	299
B	Coffman Cove	5	6	216	932	305	41	11	132	198	8	0	65	22
B	Craig	32	68	2,469	8,400	4,640	940	22	137	10,845	197	10	1,430	30
B	Klawock	9	17	559	1,835	878	151	1	7	3,604	29	6	837	22
B	Thorne Bay	6	9	256	974	244	74	5	113	489	22	2	305	5
B	Whale Pass	6	11	231	772	192	40	7	331	92	13	0	51	1
B	Other	28	76	4,604	17,987	8,822	1,344	35	1,128	22,827	393	15	4,062	118
C	Kake	4	4	10	40	0	1	0	3	29	5	0	0	0
C	Petersburg	29	32	826	3,289	513	73	63	42	1,353	176	0	184	26
C	Wrangell	15	14	285	1,101	220	59	7	130	74	8	1	18	0
C	Other	5	9	258	940	155	18	2	37	185	18	0	26	0
D	Crescent Harbor	6	6	103	391	304	67	1	19	316	2	1	8	3
D	Port Alexander	6	6	169	605	330	144	0	10	497	83	204	15	0
D	Sitka	127	204	10,973	44,194	27,945	7,889	102	1,542	49,759	763	294	3,291	317
D	Tenakee	4	4	66	236	79	19	0	35	527	0	0	18	21
D	Other	11	27	829	2,989	1,255	235	13	103	3,391	192	28	512	129
E	Angoon	7	8	151	541	70	11	0	106	1,340	6	0	126	12
E	Auke Bay	42	50	2,311	10,286	792	60	66	1,081	6,657	277	87	1,867	445
E	Fishermans Bend	4	4	104	475	27	18	2	183	415	23	12	53	16
E	Juneau	26	40	532	2,123	193	55	5	142	1,432	90	9	444	38
E	Shelter Island	4	9	353	1,351	138	23	20	215	1,481	18	29	544	83
E	Other	15	27	1,025	3,924	554	41	13	708	5,660	142	4	540	80
F	Skagway	6	9	379	1,389	267	94	263	830	8	1	0	0	2
F	Haines	4	4	131	453	33	7	76	191	2	0	0	2	0
G	Bartlett Cove	10	17	191	715	109	14	7	6	172	13	1	32	0
G	Elfin Cove	14	25	1,360	5,471	1,913	524	4	190	4,442	94	15	386	33
G	Gustavus	16	23	1,109	4,420	258	87	8	60	2,311	53	15	1,019	26
G	Hoonah	19	21	925	3,942	122	33	9	76	1,103	247	17	372	35
G	Pelican	11	12	188	569	367	50	1	54	433	8	7	104	4
G	Other	6	8	250	995	65	9	1	20	474	62	2	290	13
H	Yakutat	9	14	796	3,533	258	32	6	19	655	14	2	8	3
	Other SE	2	2	26	124	9	3	0	0	8	0	2	5	0
SE Total		439	747	39,088	154,549	56,548	12,855	1,062	12,184	135,830	3,624	898	27,456	2,643

Note: Participation (number of businesses, vessels, trips, and angler days) was determined by number of trips, not by targeted species. Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 07/15/09.

[a] Business and vessel regional and total counts are not additive as they can offload at various ports.

Appendix F2.–Saltwater logbook salmon participation, effort, kept and released by area and port of offloading, Southcentral Alaska, 2006.

Area	Port of Offloading	Businesses[a]	Vessels[a]	Trips	Angler Days	King Salmon ≥ 28"		King Salmon < 28"		Coho		Sockeye	Pink	Chum
						Kept	Released	Kept	Released	Kept	Released	Kept	Kept	Kept
J	Cordova	9	12	203	857	0	0	0	0	492	296	5	122	111
J	Seward	102	142	5,439	42,681	1,057	57	176	90	44,892	422	126	1,163	39
J	Valdez	44	50	1,832	9,992	52	5	35	24	12,647	257	31	552	14
J	Whittier	28	30	637	3,247	8	8	8	3	900	36	156	113	20
J	Other	5	7	96	500	0	0	0	0	463	59	1	24	4
P	Anchor Point	48	53	1,682	10,137	623	23	20	6	737	5	24	422	7
P	Deep Creek	89	114	4,233	27,109	1,146	71	47	9	143	0	6	63	1
P	Homer	167	196	7,476	58,222	2,162	103	135	67	6,079	88	89	1,666	55
P	Ninilchik	20	24	511	2,924	176	12	2	0	5	0	2	7	3
P	Seldovia	7	7	140	803	5	0	1	0	79	3	1	38	4
P	Other	10	22	626	2,286	372	17	21	0	633	83	1	27	0
Q	Anton Larsen Bay	8	8	62	313	153	1	1	1	18	0	0	10	0
Q	Kodiak	35	35	1,155	6,258	2,693	49	118	30	3,120	101	26	821	14
Q	Larsen Bay	9	20	520	2,104	109	33	3	18	1,787	278	20	63	19
Q	Old Harbor	4	9	368	1,317	723	57	6	3	678	21	7	68	18
Q	Port Lions	9	9	350	1,512	897	34	28	10	892	300	5	65	5
Q	Ugak Bay	4	5	68	354	79	2	0	0	130	28	0	18	1
Q	Other	26	40	783	2,893	204	56	35	9	2,729	517	338	239	11
R	Other	11	14	175	636	2	0	0	0	65	28	1	4	3
	Other SC	4	8	227	1,550	2	0	0	0	882	10	0	67	1
SC Total		479	622	26,583	175,695	10,463	528	636	270	77,371	2,532	839	5,552	330

Note: Participation (number of businesses, vessels, trips, and angler days) was determined by number of trips, not by targeted species. Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 07/15/09.

[a] Business and vessel regional and total counts are not additive as they can offload at various ports.

Appendix F3.–Saltwater logbook salmon participation, effort, kept and released by region, statewide, 2006.

Region	Businesses	Vessels	Trips	Angler Days	King Salmon ≥ 28"		King Salmon < 28"		Coho		Sockeye	Pink	Chum
					Kept	Released	Kept	Released	Kept	Released	Kept	Kept	Kept
SE Total	439	747	39,088	154,549	56,548	12,855	1,062	12,184	135,830	3,624	898	27,456	2,643
SC Total	479	622	26,583	175,695	10,463	528	636	270	77,371	2,532	839	5,552	330
Total	917	1,368	65,671	330,244	67,011	13,383	1,698	12,454	213,201	6,156	1,737	33,008	2,973

Note: Participation (number of businesses, vessels, trips, and angler days) was determined by number of trips, not by targeted species. Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 07/15/09.

Appendix F4.–Saltwater logbook bottomfish participation, effort, kept and released by area and port of offloading, Southeast Alaska, 2006.

										Rockfish							
					Angler	Halibut		Lingcod		Pelagic		Yelloweye		Other Non-Pelagic		Salmon Shark	
Area	Port of	Businesses[a]	Vessels[a]	Trips	Days	Kept	Released	Kept	Released	Kept	Released	Kept	Released	Kept	Released	Kept	Released
A	Cedars Lodge	8	8	44	183	231	77	11	1	0	0	21	0	1	2	0	0
A	Clover Pass	13	16	343	1,322	1,972	667	107	48	220	1	118	2	69	0	0	0
A	Ketchikan	67	84	3,466	15,069	5,581	2,264	330	253	798	494	711	118	1,319	646	2	41
A	Knudson Cove	21	27	1,542	6,508	913	128	13	3	69	26	90	3	167	17	11	5
A	Salmon Falls	4	12	320	1,077	890	124	26	5	49	2	34	0	91	3	0	0
A	Salmon Landing	4	18	554	2,037	385	185	3	2	220	84	456	44	783	127	0	0
A	Other	16	37	1,134	3,357	968	509	15	8	539	200	564	13	863	115	0	15
B	Coffman Cove	5	6	216	932	1,590	353	4	0	138	10	41	2	149	13	0	0
B	Craig	32	68	2,469	8,400	11,935	4,601	1,766	891	2,214	604	2,393	138	2,174	218	0	2
B	Klawock	9	17	559	1,835	3,303	1,330	403	212	1,460	302	153	33	932	390	0	1
B	Thorne Bay	6	9	256	974	650	203	79	80	160	137	288	16	232	29	0	0
B	Whale Pass	6	11	231	772	630	97	33	7	73	7	17	0	131	8	0	0
B	Other	28	76	4,604	17,987	19,971	6,036	3,124	1,579	5,187	3,475	3,651	181	3,119	1,713	7	6
C	Kake	4	4	10	40	15	6	0	3	14	25	2	0	1	2	0	0
C	Petersburg	29	32	826	3,289	3,270	4,303	29	54	234	188	136	22	116	56	0	0
C	Wrangell	15	14	285	1,101	588	455	16	6	63	105	34	29	90	159	0	0
C	Other	5	9	258	940	1,473	904	8	33	98	75	32	2	22	5	0	0
D	Crescent Harbor	6	6	103	391	78	32	31	30	53	10	46	0	14	0	0	0
D	Port Alexander	6	6	169	605	469	358	26	303	16	244	147	11	4	28	0	0
D	Sitka	127	204	10,973	44,194	30,527	6,649	4,473	6,902	19,768	4,033	9,735	676	3,883	565	15	26
D	Tenakee	4	4	66	236	365	99	0	0	17	41	8	6	11	79	0	0
D	Other	11	27	829	2,989	3,015	387	171	206	1,083	1,349	292	28	361	256	0	1
E	Angoon	7	8	151	541	485	121	2	0	45	1	20	2	40	8	0	0
E	Auke Bay	42	50	2,311	10,286	2,327	1,376	4	7	307	19	63	5	290	10	0	0
E	Fishermans Bend	4	4	104	475	214	738	0	0	0	28	2	0	0	33	0	0
E	Juneau	26	40	532	2,123	1,005	1,100	30	48	386	81	55	9	65	37	0	0
E	Shelter Island	4	9	353	1,351	1,239	614	1	1	226	0	14	0	184	0	0	0
E	Other	15	27	1,025	3,924	4,122	1,720	37	81	514	42	213	9	170	21	0	0
F	Skagway	6	9	379	1,389	11	11	0	0	6	0	0	0	15	72	0	0
F	Haines	4	4	131	453	86	35	0	0	2	0	0	0	6	0	0	0
G	Bartlett Cove	10	17	191	715	677	720	50	82	25	31	22	1	9	12	0	0
G	Elfin Cove	14	25	1,360	5,471	3,890	3,568	614	3,097	1,706	2,173	996	131	800	103	21	11
G	Gustavus	16	23	1,109	4,420	4,186	6,222	113	294	52	105	78	2	63	10	4	2
G	Hoonah	19	21	925	3,942	2,819	5,515	2	5	45	21	23	2	36	47	0	0
G	Pelican	11	12	188	569	616	225	33	356	192	268	139	20	55	39	0	0
G	Other	6	8	250	995	390	114	0	2	4	39	0	3	0	0	0	0
H	Yakutat	9	14	796	3,533	3,356	859	1,185	986	2,059	397	139	2	250	17	0	2
	Other SE	2	2	26	124	180	21	22	7	169	0	34	0	0	0	0	0
SE Total		439	747	39,088	154,549	114,422	52,726	12,761	15,592	38,211	14,617	20,767	1,510	16,515	4,840	60	112

Note: Participation (number of businesses, vessels, trips, and angler days) was determined by number of trips, not by targeted species. Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 07/15/09.

[a] Business and vessel regional and total counts are not additive as they can offload at various ports.

Appendix F5.–Saltwater logbook bottomfish participation, effort, kept and released by area and port of offloading, Southcentral Alaska, 2006.

										Rockfish							
					Angler	Halibut		Lingcod		Pelagic		Yelloweye		Other Non-Pelagic		Salmon Shark	
Area	Port of Offloading	Businesses[a]	Vessels[a]	Trips	Days	Kept	Released	Kept	Released	Kept	Released	Kept	Released	Kept	Released	Kept	Released
J	Cordova	9	12	203	857	581	325	123	109	302	76	127	23	83	2	2	9
J	Seward	102	142	5,439	42,681	47,866	26,680	4,327	3,683	19,924	4,446	3,898	182	1,691	373	15	34
J	Valdez	44	50	1,832	9,992	9,335	8,575	1,830	1,223	1,480	122	1,349	124	310	39	171	58
J	Whittier	28	30	637	3,247	3,724	2,805	324	228	505	77	753	20	340	27	8	4
J	Other	5	7	96	500	501	248	18	15	94	40	99	4	70	7	5	1
P	Anchor Point	48	53	1,682	10,137	18,525	21,212	225	212	66	19	47	4	7	0	2	15
P	Deep Creek	89	114	4,233	27,109	49,889	64,178	32	6	11	0	9	0	2	0	2	7
P	Homer	167	196	7,476	58,222	102,442	171,735	2,362	1,391	4,288	1,474	814	54	311	126	4	161
P	Ninilchik	20	24	511	2,924	5,361	5,522	0	0	0	0	0	0	0	0	9	0
P	Seldovia	7	7	140	803	1,297	1,189	34	25	15	12	36	1	0	2	1	13
P	Other	10	22	626	2,286	3,315	4,411	1	50	33	210	1	0	0	0	0	0
Q	Anton Larsen Bay	8	8	62	313	505	379	0	1	10	64	0	0	0	0	0	0
Q	Kodiak	35	35	1,155	6,258	9,141	5,356	619	133	4,182	1,719	148	4	100	37	1	13
Q	Larsen Bay	9	20	520	2,104	2,710	6,830	68	93	545	119	54	0	30	0	2	3
Q	Old Harbor	4	9	368	1,317	1,323	772	60	19	558	227	177	5	52	2	0	0
Q	Port Lions	9	9	350	1,512	1,496	1,495	8	5	401	429	9	0	27	0	0	0
Q	Ugak Bay	4	5	68	354	203	133	15	18	152	265	0	0	2	5	0	0
Q	Other	26	40	783	2,893	2,940	2,789	238	121	374	742	100	27	11	78	1	8
R	Other	11	14	175	636	779	1,021	1	2	85	393	5	0	2	0	1	4
	Other SC	4	8	227	1,550	1,011	152	124	82	2,370	29	245	8	131	7	0	1
SC Total		479	622	26,583	175,695	262,944	325,807	10,409	7,416	35,395	10,463	7,871	456	3,169	705	224	331

Note: Participation (number of businesses, vessels, trips, and angler days) was determined by number of trips, not by targeted species. Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 07/15/09.

[a] Business and vessel regional and total counts are not additive as they can offload at various ports.

Appendix F6.–Saltwater logbook bottomfish participation, effort, kept and released by region, statewide, 2006.

										Rockfish							
					Angler	Halibut		Lingcod		Pelagic		Yelloweye		Other Non-Pelagic		Salmon Shark	
Region	Businesses	Vessels	Trips	Days	Kept	Released	Kept	Released	Kept	Released	Kept	Released	Kept	Released	Kept	Released	Kept	Released
SE Total	439	747	39,088	154,549	114,422	52,726	12,761	15,592	38,211	14,617	20,767	1,510	16,515	4,840	60	112
SC Total	479	622	26,583	175,695	262,944	325,807	10,409	7,416	35,395	10,463	7,871	456	3,169	705	224	331
Total	917	1,368	65,671	330,244	377,366	378,533	23,170	23,008	73,606	25,080	28,638	1,966	19,684	5,545	284	443

Note: Participation (number of businesses, vessels, trips, and angler days) was determined by number of trips, not by targeted species. Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 07/15/09.

Appendix F7.–Saltwater logbook salmon participation, effort, kept and released by area and port of offloading, Southeast Alaska, 2007.

Area	Port of Offloading	Businesses[a]	Vessels[a]	Trips	Angler Days	King Salmon ≥ 28"		King Salmon < 28"		Coho		Sockeye	Pink	Chum
						Kept	Released	Kept	Released	Kept	Released	Kept	Kept	Kept
A	Bar Harbor	4	4	49	162	36	8	1	24	73	3	0	153	7
A	Clover Pass	10	12	217	866	297	32	0	127	2,973	12	39	1,336	73
A	Ketchikan	72	101	4,531	19,351	2,931	365	390	2,839	14,191	331	154	23,383	1,280
A	Knudson Cove	21	29	1,301	5,585	765	93	20	1,115	3,330	88	46	7,563	706
A	Salmon Falls	4	17	434	1,405	274	35	9	280	3,673	36	47	3,453	364
A	Salmon Landing	4	10	302	1,130	20	1	6	20	34	0	0	202	21
A	Thomas Basin	5	8	185	620	16	1	0	5	45	9	0	174	6
A	Other	11	35	906	2,262	420	116	25	336	1,571	12	23	878	270
B	Coffman Cove	6	7	222	941	164	26	19	269	1,099	3	2	146	9
B	Craig	35	76	2,572	8,874	4,169	464	56	122	24,338	521	34	1,761	222
B	El Capitan Lodge	6	13	505	2,043	552	15	51	14	5,253	40	1	269	97
B	Klawock	11	21	696	2,256	627	37	0	10	6,347	83	0	850	94
B	Point Baker	4	5	100	443	0	0	0	0	57	1	1	429	1
B	Thorne Bay	7	9	273	1,014	139	16	2	220	1,256	0	2	538	51
B	Whale Pass	7	10	187	625	121	39	27	254	1,104	61	7	112	11
B	Other	18	59	3,669	14,363	5,938	701	122	789	22,664	199	97	9,342	472
C	Kake	5	7	59	205	1	0	0	1	150	3	0	128	17
C	Petersburg	28	35	819	3,317	405	12	19	22	1,087	224	7	880	22
C	Wrangell	11	10	244	955	235	33	20	74	452	41	5	61	7
C	Other	7	9	278	1,070	151	7	8	27	666	15	0	492	9
D	Crescent Harbor	4	5	222	833	552	15	2	31	1,152	6	2	101	15
D	Port Alexander	7	7	219	780	297	59	0	7	1,484	124	234	20	9
D	Sitka	117	195	10,746	43,907	24,886	3,589	347	1,378	73,644	1,426	288	5,871	1,126
D	Other	12	29	830	2,816	1,093	115	6	170	4,721	73	2	888	169
E	Angoon	9	11	369	1,299	221	52	3	402	1,549	31	1	273	54
E	Auke Bay	37	47	2,452	10,998	1,096	138	61	954	4,220	121	95	1,863	1,542
E	Juneau	27	40	415	1,582	120	66	3	65	579	33	4	106	29
E	Other	14	28	1,076	4,034	549	57	51	643	3,478	89	38	1,537	491
F	Skagway	5	7	406	1,421	179	91	100	669	0	0	0	4	2
F	Haines	4	4	108	375	70	0	127	125	0	0	0	3	0
G	Bartlett Cove	6	15	269	1,081	106	5	16	11	157	4	0	88	0
G	Elfin Cove	12	25	1,276	5,249	2,011	402	61	277	4,514	59	26	1,192	74
G	Gustavus	19	30	1,306	5,285	574	131	1	109	2,415	39	45	1,662	110
G	Hoonah	19	25	1,002	4,419	141	67	0	328	967	197	4	413	152
G	Pelican	6	8	220	742	337	46	12	39	758	17	2	68	6
G	Other	6	8	309	2,709	57	25	7	105	3,089	45	4	2,650	386
H	Yakutat	7	13	816	3,482	285	15	4	20	2,363	8	31	64	2
	Other SE	3	4	9	52	0	0	0	0	48	86	0	0	0
SE Total		430	768	39,599	158,551	49,835	6,874	1,576	11,881	195,501	4,040	1,241	68,953	7,906

Note: Participation (number of businesses, vessels, trips, and angler days) was determined by number of trips, not by targeted species. Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 07/15/09.

[a] Business and vessel regional and total counts are not additive as they can offload at various ports.

Appendix F8.–Saltwater logbook salmon participation, effort, kept and released by area and port of offloading, Southcentral Alaska, 2007.

Area	Port of Offloading	Businesses[a]	Vessels[a]	Trips	Angler Days	King Salmon ≥ 28"		King Salmon < 28"		Coho		Sockeye	Pink	Chum
						Kept	Released	Kept	Released	Kept	Released	Kept	Kept	Kept
J	Chenega	4	4	58	227	12	10	0	0	190	9	0	0	31
J	Cordova	7	9	173	679	1	0	0	0	242	22	1	66	1
J	Seward	104	143	5,700	42,142	661	44	113	47	58,473	803	438	1,760	25
J	Valdez	46	55	1,694	8,549	24	3	26	116	11,224	215	154	571	13
J	Whittier	31	34	753	3,537	19	0	0	3	1,527	588	56	118	64
P	Anchor Point	46	51	1,762	8,905	500	13	7	4	832	3	42	112	2
P	Deep Creek	87	116	4,428	24,327	670	23	21	4	208	1	2	18	0
P	Happy Valley	4	16	637	2,247	414	10	13	3	427	0	4	11	0
P	Homer	165	190	7,506	52,791	1,063	108	101	27	7,183	99	112	806	40
P	Ninilchik	15	15	446	2,139	105	7	0	0	19	0	0	0	0
P	Seldovia	10	11	195	869	4	1	0	0	127	1	5	56	0
P	Other	10	11	62	225	5	0	5	0	83	7	0	0	0
Q	Kodiak	38	38	1,326	6,029	3,661	77	98	21	2,314	102	23	608	20
Q	Larsen Bay	8	18	559	2,157	27	0	2	0	2,242	234	8	38	7
Q	Old Harbor	4	9	370	1,297	474	5	0	0	396	3	25	18	2
Q	Port Lions	10	12	424	1,819	353	20	26	9	1,831	71	8	100	3
Q	Raspberry Island	4	5	54	291	28	3	0	28	282	21	0	46	0
Q	Other	28	41	909	3,239	170	100	154	20	3,168	459	575	158	11
R	Chignik	4	4	16	49	0	0	0	0	10	0	0	0	0
R	Other	13	17	216	797	9	0	0	0	32	0	0	1	0
	Other SC	9	12	265	1,649	1	0	0	0	955	55	10	132	5
SC Total		488	641	27,553	163,964	8,201	424	566	282	91,765	2,693	1,463	4,619	224

Note: Participation (number of businesses, vessels, trips, and angler days) was determined by number of trips, not by targeted species. Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 07/15/09.

[a] Business and vessel regional and total counts are not additive as they can offload at various ports.

Appendix F9.–Saltwater logbook salmon participation, effort, kept and released by region, Statewide, 2007.

Region	Businesses	Vessels	Trips	Angler Days	King Salmon ≥ 28"		King Salmon < 28"		Coho		Sockeye	Pink	Chum
					Kept	Released	Kept	Released	Kept	Released	Kept	Kept	Kept
SE Total	430	768	39,599	158,551	49,835	6,874	1,576	11,881	195,501	4,040	1,241	68,953	7,906
SC Total	488	641	27,553	163,964	8,201	424	566	282	91,765	2,693	1,463	4,619	224
Total	918	1,409	67,152	322,515	58,036	7,298	2,142	12,163	287,266	6,733	2,704	73,572	8,130

Note: Participation (number of businesses, vessels, trips, and angler days) was determined by number of trips, not by targeted species. Data are current as of 07/15/09.

Appendix F10.–Saltwater logbook bottomfish participation, effort, kept and released by area and port of offloading, Southeast Alaska, 2007.

										Rockfish							
					Angler	Halibut		Lingcod		Pelagic		Yelloweye		Other Non-Pelagic		Salmon Shark	
Area	Port of Offloading	Businesses[a]	Vessels[a]	Trips	Days	Kept	Released	Kept	Released	Kept	Released	Kept	Released	Kept	Released	Kept	Released
A	Bar Harbor	4	4	49	162	100	32	0	0	6	2	25	5	15	11	0	0
A	Clover Pass	10	12	217	866	1,319	164	83	7	251	0	118	1	41	0	0	0
A	Ketchikan	72	101	4,531	19,351	6,916	3,161	255	166	1,521	565	1,052	133	2,697	572	11	0
A	Knudson Cove	21	29	1,301	5,585	864	59	16	15	139	25	96	1	188	6	0	0
A	Salmon Falls	4	17	434	1,405	1,295	156	27	9	98	3	69	0	329	6	0	0
A	Salmon Landing	4	10	302	1,130	123	5	0	1	453	101	239	1	605	67	0	0
A	Thomas Basin	5	8	185	620	187	34	0	4	35	4	76	0	290	0	2	0
A	Other	11	35	906	2,262	915	75	31	1	376	29	268	10	874	182	0	0
B	Coffman Cove	6	7	222	941	1,633	813	1	2	50	2	45	1	110	1	0	0
B	Craig	35	76	2,572	8,874	13,378	4,786	1,372	1,698	2,236	808	2,048	84	1,418	219	1	0
B	El Capitan Lodge	6	13	505	2,043	2,307	719	174	409	352	582	298	26	225	78	0	0
B	Klawock	11	21	696	2,256	3,890	1,691	331	482	2,191	419	247	65	942	839	0	0
B	Point Baker	4	5	100	443	519	124	56	49	902	165	85	8	496	250	0	0
B	Thorne Bay	7	9	273	1,014	792	213	60	137	213	85	257	16	126	3	0	0
B	Whale Pass	7	10	187	625	392	82	6	0	20	0	12	0	53	4	0	0
B	Other	18	59	3,669	14,363	19,168	2,203	1,410	805	5,637	716	2,287	163	2,551	326	1	0
C	Kake	5	7	59	205	240	150	9	45	350	41	26	0	8	3	0	0
C	Petersburg	28	35	819	3,317	3,483	3,138	22	101	418	63	163	13	174	38	0	0
C	Wrangell	11	10	244	955	536	395	7	6	36	13	21	0	15	2	0	0
C	Other	7	9	278	1,070	1,663	787	17	28	170	11	36	0	59	0	0	0
D	Crescent Harbor	4	5	222	833	574	55	48	115	142	4	230	1	11	0	0	0
D	Port Alexander	7	7	219	780	612	335	26	279	129	957	141	10	26	38	0	0
D	Sitka	117	195	10,746	43,907	30,324	5,243	2,836	10,169	24,131	3,535	9,770	665	4,642	426	16	0
D	Other	12	29	830	2,816	2,564	335	124	93	693	476	268	18	247	35	0	0
E	Angoon	9	11	369	1,299	1,494	1,114	6	0	214	85	14	10	157	6	0	0
E	Auke Bay	37	47	2,452	10,998	3,109	1,457	6	36	300	27	60	5	454	30	3	0
E	Juneau	27	40	415	1,582	656	565	12	45	337	55	83	7	113	33	0	0
E	Other	14	28	1,076	4,034	3,908	1,379	24	16	638	26	174	1	373	17	0	0
F	Skagway	5	7	406	1,421	11	13	0	0	0	1	0	0	0	0	0	0
F	Haines	4	4	108	375	148	56	0	0	0	0	0	0	0	0	0	0
G	Bartlett Cove	6	15	269	1,081	1,222	1,158	52	201	48	16	41	7	7	2	0	0
G	Elfin Cove	12	25	1,276	5,249	4,387	2,435	439	2,469	2,388	1,132	824	62	788	113	13	0
G	Gustavus	19	30	1,306	5,285	6,112	7,714	126	389	425	127	200	16	166	37	7	0
G	Hoonah	19	25	1,002	4,419	3,157	9,153	2	0	49	15	12	1	53	8	0	0
G	Pelican	6	8	220	742	722	70	27	173	193	108	109	16	23	6	0	0
G	Other	6	8	309	2,709	1,812	1,083	4	4	15	13	3	7	4	35	0	0
H	Yakutat	7	13	816	3,482	3,036	755	1,007	908	1,814	178	57	0	181	4	0	0
	Other SE	3	4	9	52	3	0	0	0	0	0	0	0	0	1	0	0
SE Total		430	768	39,599	158,551	123,571	51,707	8,616	18,862	46,970	10,389	19,454	1,353	18,461	3,398	54	0

Note: Participation (number of businesses, vessels, trips, and angler days) was determined by number of trips, not by targeted species. Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent.Data are current as of 07/15/09.

[a] Business and vessel regional and total counts are not additive as they can offload at various ports.

Appendix F11.–Saltwater logbook bottomfish participation, effort, kept and released by area and port of offloading, Southcentral Alaska, 2007.

										Rockfish							
					Angler	Halibut		Lingcod		Pelagic		Yelloweye		Other Non-Pelagic		Salmon Shark	
Area	Port of Offloading	Businesses[a]	Vessels[a]	Trips	Days	Kept	Released	Kept	Released	Kept	Released	Kept	Released	Kept	Released	Kept	Released
J	Chenega	4	4	58	227	339	145	66	190	404	41	35	1	3	0	0	0
J	Cordova	7	9	173	679	594	312	76	49	422	33	99	11	103	21	1	0
J	Seward	104	143	5,700	42,142	53,694	29,272	5,693	4,633	26,299	3,491	4,415	84	1,758	263	24	1
J	Valdez	46	55	1,694	8,549	8,625	9,089	1,963	1,332	2,785	203	1,783	213	401	126	148	0
J	Whittier	31	34	753	3,537	3,328	2,676	284	563	779	912	614	13	211	28	4	1
P	Anchor Point	46	51	1,762	8,905	16,573	22,981	124	257	75	12	26	0	1	0	0	0
P	Deep Creek	87	116	4,428	24,327	45,541	63,804	109	28	98	4	14	6	6	2	2	0
P	Happy Valley	4	16	637	2,247	3,405	3,543	3	0	0	0	0	0	0	0	0	0
P	Homer	165	190	7,506	52,791	97,213	151,973	4,428	2,740	6,624	1,505	951	22	339	36	5	0
P	Ninilchik	15	15	446	2,139	4,012	7,394	0	17	6	2	16	0	0	0	1	0
P	Seldovia	10	11	195	869	1,449	1,611	42	70	12	63	39	5	4	0	0	0
P	Other	10	11	62	225	217	306	4	13	0	0	1	0	0	0	0	0
Q	Kodiak	38	38	1,326	6,029	9,457	6,774	845	119	7,303	2,063	226	24	188	81	3	0
Q	Larsen Bay	8	18	559	2,157	2,794	6,317	61	33	1,183	188	160	7	145	14	0	0
Q	Old Harbor	4	9	370	1,297	1,277	503	113	43	1,513	1,060	208	2	49	33	1	0
Q	Port Lions	10	12	424	1,819	1,827	1,357	70	30	733	441	28	1	71	115	0	0
Q	Raspberry Island	4	5	54	291	212	305	36	15	49	157	0	0	2	9	1	0
Q	Other	28	41	909	3,239	3,430	3,294	542	310	1,254	3,712	186	23	50	62	0	0
R	Chignik	4	4	16	49	73	54	2	0	36	0	0	0	0	0	0	0
R	Other	13	17	216	797	1,072	1,542	5	5	149	553	23	0	4	0	0	0
	Other SC	9	12	265	1,649	770	411	106	131	2,606	249	366	36	191	105	0	0
SC Total		488	641	27,553	163,964	255,902	313,663	14,572	10,578	52,330	14,689	9,190	448	3,526	895	190	2

Note: Participation (number of businesses, vessels, trips, and angler days) was determined by number of trips, not by targeted species. Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 07/15/09.

[a] Business and vessel regional and total counts are not additive as they can offload at various ports.

Appendix F12.–Saltwater logbook bottomfish participation, effort, kept and released by region, statewide, 2007.

										Rockfish							
					Angler	Halibut		Lingcod		Pelagic		Yelloweye		Other Non-Pelagic		Salmon Shark	
Region	Businesses	Vessels	Trips	Days	Kept	Released	Kept	Released	Kept	Released	Kept	Released	Kept	Released	Kept	Released	
SE Total	430	768	39,599	158,551	123,571	51,707	8,616	18,862	46,970	10,389	19,454	1,353	18,461	3,398	54	0	
SC Total	488	641	27,553	163,964	255,902	313,663	14,572	10,578	52,330	14,689	9,190	448	3,526	895	190	2	
Total	918	1,409	67,152	322,515	379,473	365,370	23,188	29,440	99,300	25,078	28,644	1,801	21,987	4,293	244	2	

Note: Participation (number of businesses, vessels, trips, and angler days) was determined by number of trips, not by targeted species. Data are current as of 07/15/09.

Appendix F13.–Saltwater logbook salmon participation, effort, kept and released by area and port of offloading, Southeast Alaska, 2008.

Area	Port of Offloading	Businesses[a]	Vessels[a]	Trips	Angler Days	King Salmon ≥ 28"		King Salmon < 28"		Coho		Sockeye	Pink	Chum
						Kept	Released	Kept	Released	Kept	Released	Kept	Kept	Kept
A	Clover Pass	9	10	151	601	109	12	2	58	1,663	7	15	1,095	11
A	Ketchikan	68	98	4,705	19,245	1,406	171	453	2,857	11,167	164	102	18,714	440
A	Knudson Cove	22	24	1,166	5,094	197	59	17	1,143	2,718	37	18	6,553	201
A	Other	17	41	1,198	3,160	314	97	12	631	5,000	32	47	3,979	407
B	Coffman Cove	6	7	150	617	15	12	21	98	314	1	2	85	0
B	Craig	32	70	2,430	8,058	1,076	365	14	171	18,214	381	62	1,083	17
B	El Capitan Lodge	4	11	472	1,840	151	28	4	29	2,874	4	0	11	4
B	Klawock	13	24	690	2,221	199	66	3	22	4,473	55	1	408	13
B	Point Baker	4	5	112	514	2	1	0	1	47	18	0	72	0
B	Port St Nicholas	4	6	79	279	55	1	0	1	581	4	0	5	2
B	Thorne Bay	7	12	293	1,057	19	30	8	327	1,010	25	38	727	12
B	Whale Pass	5	8	159	511	7	11	0	274	234	31	1	23	0
B	Other	21	62	3,701	14,574	1,455	484	19	818	21,243	128	60	4,587	67
C	Petersburg	26	33	790	3,042	221	28	4	70	743	9	1	42	9
C	Wrangell	13	12	223	936	102	20	0	262	202	7	0	18	2
C	Other	9	11	316	1,231	17	15	0	4	252	1	8	46	3
D	Crescent Harbor	5	7	131	504	141	25	0	0	453	1	1	55	2
D	Port Alexander	7	9	154	524	46	19	0	1	400	2	122	30	2
D	Sitka	124	198	10,397	42,517	12,238	5,969	46	1,329	37,502	320	132	4,222	336
D	Other	15	32	715	2,546	661	139	2	42	3,707	234	18	233	88
E	Angoon	11	14	270	983	20	31	1	38	1,086	0	1	146	13
E	Auke Bay	31	41	2,135	9,211	628	173	50	295	1,618	42	44	777	1,041
E	Juneau	30	43	477	1,949	51	47	2	44	329	26	0	103	83
E	Other	12	28	1,059	4,069	85	135	5	86	1,455	33	21	513	93
F1	Skagway	6	6	322	1,082	119	206	0	618	2	0	0	2	5
F2	Haines	4	4	94	301	34	10	0	129	0	0	0	1	1
G	Bartlett Cove	8	17	210	824	4	0	0	0	36	0	0	5	0
G	Elfin Cove	13	27	1,477	5,729	430	90	5	72	2,783	18	18	507	29
G	Excursion Inlet	4	6	155	4,258	55	1	0	1	1,637	3	4	2,624	396
G	Gustavus	18	37	1,338	5,365	201	35	0	61	1,481	12	6	358	15
G	Hoonah	15	20	689	3,112	31	75	0	51	209	77	5	177	53
G	Pelican	10	11	216	729	135	35	0	5	539	2	2	55	3
G	Other	4	6	149	573	16	4	0	5	65	25	0	27	6
H	Yakutat	8	13	815	3,487	307	27	4	139	1,030	2	1	9	3
	Other SE	5	5	11	50	5	0	0	0	5	0	0	0	0
SE Total		429	759	37,449	150,793	20,552	8,421	672	9,682	125,072	1,701	730	47,292	3,357

Note: Participation (number of businesses, vessels, trips, and angler days) was determined by number of trips, not by targeted species. Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 07/15/09.

[a] Business and vessel regional and total counts are not additive as they can offload at various ports.

Appendix F14.–Saltwater logbook salmon participation, effort, kept and released by area and port of offloading, Southcentral Alaska, 2008.

Area	Port of Offloading	Businesses[a]	Vessels[a]	Trips	Angler Days	King Salmon ≥ 28"		King Salmon < 28"		Coho		Sockeye	Pink	Chum
						Kept	Released	Kept	Released	Kept	Released	Kept	Kept	Kept
J	Cordova	5	7	102	349	0	0	0	0	54	18	2	32	4
J	Seward	98	136	5,182	39,091	354	27	57	57	38,711	485	261	2,838	32
J	Valdez	40	47	1,412	7,159	23	4	13	7	6,636	117	35	626	3
J	Whittier	28	31	755	3,726	5	0	1	1	617	114	107	195	93
J	Other	8	10	106	531	4	0	5	2	696	39	6	43	7
P	Anchor Point	44	49	1,419	7,297	222	6	21	10	249	0	7	158	1
P	Deep Creek	75	100	4,196	23,318	387	4	27	3	134	0	1	35	14
P	Homer	144	166	6,461	45,650	657	13	70	10	4,341	21	63	651	9
P	Ninilchik	27	29	487	2,197	89	0	4	0	0	0	0	1	0
P	Seldovia	8	8	176	784	5	0	0	0	104	0	0	35	0
P	Other	10	21	593	2,074	255	11	2	0	540	3	5	52	0
Q	Anton Larsen Bay	6	6	17	66	7	0	0	0	5	0	0	12	0
Q	Kodiak	47	49	1,350	5,839	2,583	120	242	131	3,265	76	16	704	15
Q	Larsen Bay	9	16	461	1,782	116	53	69	71	1,438	37	21	61	0
Q	Port Lions	11	14	329	1,325	190	10	14	16	887	38	7	152	4
Q	Raspberry Island	5	5	73	336	17	40	1	1	63	4	4	46	6
Q	Other	25	40	1,127	3,963	416	60	81	17	2,674	129	246	188	10
R	Other	9	14	176	596	0	0	0	0	55	49	0	1	1
	Other SC	6	9	135	634	1	0	5	0	228	0	0	43	0
SC Total		459	596	24,557	146,717	5,331	348	612	326	60,697	1,130	781	5,873	199

Note: Participation (number of businesses, vessels, trips, and angler days) was determined by number of trips, not by targeted species. Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 07/15/09.

[a] Business and vessel regional and total counts are not additive as they can offload at various ports.

Appendix F15.–Saltwater logbook salmon participation, effort, kept and released by region, Statewide, 2008.

Region	Businesses	Vessels	Trips	Angler Days	King Salmon ≥ 28"		King Salmon < 28"		Coho		Sockeye	Pink	Chum
					Kept	Released	Kept	Released	Kept	Released	Kept	Kept	Kept
SE Total	429	759	37,449	150,793	20,552	8,421	672	9,682	125,072	1,701	730	47,292	3,357
SC Total	459	596	24,557	146,717	5,331	348	612	326	60,697	1,130	781	5,873	199
Total	888	1,355	62,006	297,510	25,883	8,769	1,284	10,008	185,769	2,831	1,511	53,165	3,556

Note: Participation (number of businesses, vessels, trips, and angler days) was determined by number of trips, not by targeted species. Data are current as of 07/15/09.

Appendix F16.–Saltwater logbook bottomfish participation, effort, kept and released by area and port of offloading, Southeast Alaska, 2008.

										Rockfish							
					Angler	Halibut		Lingcod		Pelagic		Yelloweye		Other Non-Pelagic		Salmon Shark	
Area	Port of Offloading	Businesses[a]	Vessels[a]	Trips	Days	Kept	Released	Kept	Released	Kept	Released	Kept	Released	Kept	Released	Kept	Released
A	Clover Pass	9	10	151	601	883	24	17	2	122	0	55	0	11	0	0	0
A	Ketchikan	68	98	4,705	19,245	5,527	2,059	148	165	1,064	276	1,190	103	3,542	366	0	1
A	Knudson Cove	22	24	1,166	5,094	604	89	8	14	50	9	53	4	119	3	0	0
A	Other	17	41	1,198	3,160	1,583	126	45	15	443	18	252	3	534	8	2	0
B	Coffman Cove	6	7	150	617	914	351	3	0	24	1	27	0	107	0	0	0
B	Craig	32	70	2,430	8,058	11,725	5,221	1,114	1,832	5,567	1,122	1,821	179	2,017	661	9	0
B	El Capitan Lodge	4	11	472	1,840	1,887	453	159	336	358	144	577	10	97	22	0	0
B	Klawock	13	24	690	2,221	3,971	1,262	281	448	2,559	415	213	110	851	496	0	0
B	Point Baker	4	5	112	514	439	154	66	101	1,205	319	146	43	385	197	0	0
B	Port St Nicholas	4	6	79	279	412	311	23	17	111	2	37	0	36	9	0	0
B	Thorne Bay	7	12	293	1,057	692	99	44	31	178	11	193	7	269	5	0	0
B	Whale Pass	5	8	159	511	366	127	2	2	24	14	5	0	28	23	0	0
B	Other	21	62	3,701	14,574	17,669	2,584	1,199	1,175	7,332	1,453	2,440	81	2,515	440	0	0
C	Petersburg	26	33	790	3,042	3,346	2,806	10	27	182	77	57	6	54	8	0	0
C	Wrangell	13	12	223	936	429	279	13	11	29	8	24	0	42	7	0	0
C	Other	9	11	316	1,231	1,661	532	33	145	1,982	568	120	20	110	52	0	0
D	Crescent Harbor	5	7	131	504	287	5	7	41	248	4	160	11	33	0	0	0
D	Port Alexander	7	9	154	524	365	120	22	108	183	20	112	6	19	12	0	0
D	Sitka	124	198	10,397	42,517	26,892	3,823	2,360	11,328	37,805	3,663	8,864	565	6,584	605	5	0
D	Other	15	32	715	2,546	1,930	420	66	96	634	666	191	24	313	297	0	0
E	Angoon	11	14	270	983	897	526	2	3	281	17	27	0	262	40	0	0
E	Auke Bay	31	41	2,135	9,211	2,376	1,325	3	4	412	25	54	2	537	19	0	0
E	Juneau	30	43	477	1,949	697	801	2	13	301	73	8	1	153	38	0	0
E	Other	12	28	1,059	4,069	3,964	2,106	25	35	946	11	262	12	500	27	2	0
F1	Skagway	6	6	322	1,082	5	4	0	0	0	0	0	0	0	0	0	0
F2	Haines	4	4	94	301	70	2	0	1	0	0	0	0	0	0	0	0
G	Bartlett Cove	8	17	210	824	730	557	31	105	36	24	13	0	27	8	0	0
G	Elfin Cove	13	27	1,477	5,729	5,198	2,794	458	3,540	4,087	573	1,081	81	1,401	94	6	0
G	Excursion Inlet	4	6	155	4,258	3,908	139	0	1	16	0	2	0	31	2	0	0
G	Gustavus	18	37	1,338	5,365	4,802	4,727	100	438	224	78	122	1	94	4	2	0
G	Hoonah	15	20	689	3,112	2,046	5,292	1	0	26	13	2	5	35	21	0	0
G	Pelican	10	11	216	729	627	107	45	195	164	46	95	8	22	5	0	0
G	Other	4	6	149	573	209	355	0	21	19	1	6	0	10	2	0	0
H	Yakutat	8	13	815	3,487	3,409	529	1,207	486	2,312	25	105	1	165	0	0	0
	Other SE	5	5	11	50	34	2	5	0	39	7	14	4	7	0	0	0
SE Total		429	759	37,449	150,793	110,554	40,111	7,499	20,736	68,963	9,683	18,328	1,287	20,910	3,471	26	1

Note: Participation (number of businesses, vessels, trips, and angler days) was determined by number of trips, not by targeted species. Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 07/15/09.

[a] Business and vessel regional and total counts are not additive as they can offload at various ports.

Appendix F17.–Saltwater logbook bottomfish participation, effort, kept and released by area and port of offloading, Southcentral Alaska, 2008.

										Rockfish							
					Angler	Halibut		Lingcod		Pelagic		Yelloweye		Other Non-Pelagic		Salmon Shark	
Area	Port of Offloading	Businesses[a]	Vessels[a]	Trips	Days	Kept	Released	Kept	Released	Kept	Released	Kept	Released	Kept	Released	Kept	Released
J	Cordova	5	7	102	349	183	53	58	58	309	67	81	6	57	5	1	0
J	Valdez	40	47	1,412	7,159	6,818	4,990	1,886	985	2,153	59	1,470	169	345	27	45	0
J	Seward	98	136	5,182	39,091	50,194	26,642	6,536	4,314	28,723	3,156	4,375	142	2,101	241	10	0
J	Whittier	28	31	755	3,726	4,266	2,854	616	460	1,473	345	702	13	362	126	9	0
J	Other	8	10	106	531	342	197	69	164	289	86	63	19	70	55	0	0
P	Anchor Point	44	49	1,419	7,297	13,813	19,992	409	438	286	18	72	0	2	0	1	0
P	Deep Creek	75	100	4,196	23,318	43,555	60,633	117	47	197	1	16	0	1	0	0	0
P	Homer	144	166	6,461	45,650	82,104	114,970	4,594	2,566	5,861	967	1,016	54	242	35	0	0
P	Ninilchik	27	29	487	2,197	4,088	5,695	5	13	2	1	20	0	0	1	0	0
P	Seldovia	8	8	176	784	1,370	1,814	82	43	22	50	45	10	1	1	0	0
P	Other	10	21	593	2,074	3,163	3,783	2	1	0	0	0	0	0	0	0	0
Q	Anton Larsen Bay	6	6	17	66	88	84	1	0	34	0	0	0	0	0	0	0
Q	Kodiak	47	49	1,350	5,839	8,647	7,169	1,178	350	7,746	1,530	441	4	124	27	1	0
Q	Larsen Bay	9	16	461	1,782	2,692	6,808	48	71	596	178	135	3	74	71	0	0
Q	Port Lions	11	14	329	1,325	1,583	1,096	117	25	593	328	20	1	63	24	0	0
Q	Raspberry Island	5	5	73	336	333	381	39	22	73	131	4	0	19	0	0	0
Q	Other	25	40	1,127	3,963	4,218	4,315	700	500	2,489	2,590	478	15	135	200	0	0
R	Other	9	14	176	596	883	1,361	24	49	131	552	15	1	2	0	0	0
	Other SCI	6	9	135	634	824	267	85	48	704	26	116	16	24	51	1	0
SC Total		459	596	24,557	146,717	229,164	263,104	16,566	10,154	51,681	10,085	9,069	453	3,622	864	68	0

Note: Participation (number of businesses, vessels, trips, and angler days) was determined by number of trips, not by targeted species. Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 07/15/09.

[a] Business and vessel regional and total counts are not additive as they can offload at various ports.

Appendix F18.–Saltwater logbook bottomfish participation, effort, kept and released by region, statewide, 2008.

					Rockfish											
				Angler	Halibut		Lingcod		Pelagic		Yelloweye		Other Non-Pelagic		Salmon Shark	
Region	Businesses	Vessels	Trips	Days	Kept	Released	Kept	Released	Kept	Released	Kept	Released	Kept	Released	Kept	Released
SE Total	429	759	37,449	150,793	110,554	40,111	7,499	20,736	68,963	9,683	18,328	1,287	20,910	3,471	26	1
SC Total	459	596	24,557	146,717	229,164	263,104	16,566	10,154	51,681	10,085	9,069	453	3,622	864	68	0
Total	888	1,355	62,006	297,510	339,718	303,215	24,065	30,890	120,644	19,768	27,397	1,740	24,532	4,335	94	1

Note: Participation (number of businesses, vessels, trips, and angler days) was determined by number of trips, not by targeted species. Data are current as of 07/15/09.

APPENDIX G
FRESHWATER LOGBOOK SUMMARIES BY AREA

Appendix G1.–Freshwater logbook participation by site code and area, Southeast Alaska, 2006.

Area	Description	Trips	Businesses[a]	Guides[a]	Angler Days				
					Resident	Nonres	Unknown	Crew	Total
A	Other Lakes	75	7	18	0	349	3	0	352
A	Other Streams	99	5	14	0	417	7	0	424
B	Harris River	31	6	9	1	83	4	0	88
B	Staney Creek	52	5	8	0	120	8	0	128
B	Thorne System Stream and Lake	59	8	11	4	131	12	0	147
B	Sweetwater System Stream and Lake	14	4	6	0	44	3	0	47
B	Other Lakes	32	6	9	2	93	0	1	96
B	Other Streams	67	11	19	1	182	9	0	192
C	All Lakes and Streams	55	11	14	0	145	0	2	147
D	Eva Lake and Stream	13	4	9	0	48	0	2	50
D	Unspecified Streams	20	8	13	1	79	0	1	81
D	Baranof Lake (Warm Springs Lake)	34	4	8	0	91	0	1	92
D	Deer Lake (Baranof Island)	10	4	5	0	30	0	0	30
D	Nakwasina Sound Streams	19	5	5	0	78	0	0	78
D	Other Lakes	10	6	8	0	40	0	1	41
D	Other Streams	193	16	42	4	731	0	19	754
E	Admiralty Island Streams	283	10	28	4	1,051	4	0	1,059
E	Other Lakes	27	5	14	0	96	0	0	96
E	Other Streams	412	8	32	9	1,630	3	8	1,650
G	Mud Bay Creek (Chichagof Island)	34	7	10	0	102	0	6	108
G	Trail River (Chichagof Island)	22	5	7	2	114	0	7	123
G	Chicken Creek (Chichagof Island)	6	4	5	0	25	0	2	27
G	North Chichagof Island Streams	10	5	6	0	45	0	7	52
H	Situk River (reach unspecified)	441	5	14	31	955	5	51	1,042
H	Akwe River	94	4	7	17	418	1	42	478
H	Tsiu River	344	4	14	17	1,389	85	3	1,494
H	Other Lakes and Streams	396	8	20	11	1,637	29	26	1,703
	Other Lakes and Streams in SE	186	4	10	2	847	36	0	885
SE Total		3,038	69	173	106	10,970	209	179	11,464

Note: Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 08/07/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G2.–Freshwater logbook participation by site code and area, Southcentral Alaska, 2006.

Area	Description	Trips	Businesses[a]	Guides[a]	Angler Days				
					Resident	Nonres	Unknown	Crew	Total
J	East Prince William Sound Streams	93	4	9	25	433	0	4	462
J	Other Lakes and Streams	12	7	9	6	52	0	1	59
K	Knik Arm Streams	375	13	19	486	853	11	44	1,394
M	Willow Creek	88	13	14	40	146	0	1	187
M	Montana Creek	21	4	5	14	31	0	2	47
M	Clear Creek (Chunilna Creek)	80	9	16	31	276	15	1	323
M	Little Willow Creek	39	9	10	25	101	8	3	137
M	Kashwitna River	54	5	5	79	133	1	9	222
M	Talkeetna River	417	10	31	182	1,489	101	48	1,820
M	Other Lakes and Streams - East Susitna Drainage	72	13	16	24	155	2	4	185
M	Lake Creek	1,072	25	61	240	2,950	39	95	3,324
M	Talachulitna River	392	11	22	159	1,024	7	33	1,223
M	Fish Lake Creek and Fish Lakes	69	6	16	5	156	0	2	163
M	Yentna River Drainage (Remainder)	135	16	25	25	458	0	3	486
M	Yentna River	197	9	23	29	507	2	10	548
M	Deshka River (Kroto Creek) above weir	94	11	14	120	196	5	23	344
M	Deshka River (Kroto Creek) below weir	312	18	26	362	825	31	28	1,246
M	Indian Creek (into Yentna near Fish Lakes)	126	8	21	31	324	1	40	396
M	Other Lakes - West Susitna Drainage	6	4	5	2	22	0	0	24
M	Other Streams - West Susitna Drainage	44	7	10	20	124	0	3	147
M	Other Lakes and Streams	21	5	5	0	82	0	0	82
N	Chuitna River	115	15	27	31	374	1	1	407
N	Big River Lakes	912	16	43	128	3,265	97	7	3,497
N	Crescent Lake	16	8	11	0	74	3	0	77
N	Crescent River (Grecian River)	136	4	6	6	460	3	0	469
N	Kamishak River	162	10	34	2	488	0	5	495
N	Kustatan River	253	17	43	44	1,051	15	12	1,122
N	Bachatna Creek	12	5	7	0	52	0	0	52
N	Other Lakes and Streams	151	10	17	32	438	2	0	472
N	Wolverine Creek (by Big River Lakes)	809	15	42	96	2,887	101	6	3,090
P	Anchor River	52	9	10	0	166	2	4	172
P	Deep Creek	25	5	6	0	103	4	0	107
P	Russian River	88	13	19	10	169	1	2	182
P	Crescent Lake	18	4	7	0	66	4	0	70
P	Quartz Creek	18	6	6	3	46	0	0	49
P	Kasilof River below Highway	1,936	113	151	766	5,670	14	113	6,563
P	Kasilof River above Highway	47	14	15	11	139	2	6	158
P	Kasilof River reach not specified	57	18	21	25	155	2	0	182
P	Other Lakes	73	14	20	9	189	3	26	227
P	Other Streams	145	15	21	34	549	7	12	602

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Area	Description	Trips	Businesses[a]	Guides[a]	Angler Days				
					Resident	Nonres	Unknown	Crew	Total
P	Kenai River - Cook Inlet to Soldotna Bridge	9,026	237	328	3,980	29,029	220	102	33,331
P	Kenai River - Soldotna Bridge to Moose R	836	64	93	266	2,439	28	110	2,843
P	Kenai River - Moose River to Skilak Outlet	1,070	73	100	366	2,949	15	9	3,339
P	Kenai River - Skilak Inlet to Kenai Lake	1,983	43	83	561	5,500	75	97	6,233
P	Kenai River - reach not specified	86	18	19	35	244	4	2	285
Q	Buskin River	17	5	5	0	50	0	4	54
Q	Pasagshak River	15	4	4	0	38	0	11	49
Q	Roadside Streams	84	9	14	8	245	14	5	272
Q	Other Remote Lakes and Streams	351	24	40	34	1,260	5	126	1,425
Q	Roadside Lakes	54	8	12	6	161	0	5	172
Q	Olds River	15	6	6	1	58	0	2	61
Q	Ayakulik River (sometimes called Red River)	263	4	9	107	826	3	18	954
Q	Saltery River	229	7	11	69	752	7	39	867
Q	Browns Lagoon River	15	5	6	3	42	2	2	49
Q	Afognak Island Lakes and Streams	12	6	8	2	48	0	6	56
Q	Chiniak River	6	4	4	0	20	0	4	24
Q	Zachar Bay Streams	41	5	13	9	106	1	8	124
Q	Karluk Lake and River above Weir	205	9	19	7	941	14	24	986
Q	Karluk Lagoon and River below Weir	139	12	19	13	723	42	17	795
Q	Other Streams	26	4	7	0	77	1	8	86
R	Naknek River and Tributaries	560	27	62	103	1,310	4	126	1,543
R	Naknek Lake	61	6	11	19	214	0	1	234
R	Brooks River	346	20	75	29	793	5	21	848
R	Ugashik System	62	11	26	0	180	2	4	186
R	Becharof System	369	20	58	13	1,087	12	17	1,129
R	Brooks Lake	28	10	15	2	73	2	0	77
R	Chignik River	58	6	11	31	121	28	1	181
R	American Creek	460	20	62	59	1,180	4	15	1,258
R	Naknek River (Rapids Camp upstream to Naknek Lk)	478	14	38	38	1,072	12	83	1,205
R	Naknek River (dwnstream from Rapids Camp)	299	12	31	33	653	3	67	756
R	Other Alaska Peninsula / Aleutian Lakes and Streams	480	20	46	5	1,645	6	25	1,681
R	Other Streams	91	15	28	3	413	0	1	417
S	Kvichak River	973	26	100	101	2,026	24	9	2,160
S	Lower Talarik Creek	51	10	19	0	165	0	0	165
S	Copper River (Lake Iliamna Area)	569	14	36	19	1,251	11	1	1,282
S	Newhalen River	97	8	23	8	265	1	1	275
S	Alagnak (Branch) River	2,202	26	120	49	4,939	9	96	5,093
S	Lake Clark	81	7	21	2	245	0	0	247
S	Iliamna River	158	5	16	5	418	4	4	431
S	Kukaklek Lake	7	4	5	0	24	0	0	24
S	Kulik River	419	12	59	37	1,094	2	1	1,134
S	Iliamna Lake	74	8	24	3	216	4	0	223

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Area	Description	Trips	Businesses[a]	Guides[a]	Angler Days				
					Resident	Nonres	Unknown	Crew	Total
S	Nonvianuk Lake	30	10	15	7	58	0	0	65
S	Nonvianuk River (into Alagnak)	208	14	50	7	554	0	69	630
S	Tazimina River	68	7	22	3	164	1	0	168
S	Moraine Creek	645	22	107	30	1,522	23	56	1,631
S	Battle River	108	10	27	2	274	1	4	281
S	Funnel Creek	52	10	18	3	109	0	0	112
S	Nanuktuk Creek	103	13	33	8	231	0	0	239
S	Long Lake	26	5	8	1	86	0	0	87
S	Kijik River	21	4	10	0	72	0	0	72
S	Kijik Lake	9	4	7	0	28	0	0	28
S	Gibraltar River	145	10	27	8	321	0	1	330
S	Kukaklek River (Big Ku) (into Alagnak)	427	14	55	36	863	5	1	905
S	Little Kulik (into Nanuktuk Creek)	26	6	12	0	59	0	0	59
S	Other Lakes and Streams	17	6	9	0	41	0	0	41
T	Nushagak River System	226	22	34	17	552	4	66	639
T	Wood River Lakes System	265	10	50	3	627	6	5	641
T	Tikchik-Nuyakuk Lake System	138	8	24	7	271	3	1	282
T	Togiak River System	1,173	10	61	19	2,419	34	13	2,485
T	Mulchatna River	97	14	22	19	359	11	27	416
T	Agulowak River	499	9	45	5	1,019	8	3	1,035
T	Aleknagik Lake	150	5	22	1	367	4	2	374
T	Kulukak River	155	4	12	2	324	3	0	329
T	Agulukpak River	304	10	43	3	593	2	1	599
T	Nushagak River - upstream of Mulchatna River	368	15	46	5	734	0	2	741
T	Wood River	51	4	16	5	131	1	0	137
T	Nushagak River - Black Point to Sonar Site	1,225	32	110	210	3,443	34	56	3,743
T	Nushagak River - Sonar Site to Mulchatna	1,506	38	134	196	4,386	38	196	4,816
T	Other Lakes and Streams	232	8	22	0	461	5	0	466
	Other Lakes and Streams in SC	98	3	4	17	318	3	0	338
SC total		39,512	528	1,224	9,742	111,956	1,234	2,123	125,055

Note: Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 08/07/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G3.–Freshwater logbook participation by site code and area, AYK Alaska, 2006.

Area	Description	Trips	Businesses[a]	Guides[a]	Angler Days				
					Resident	Nonres	Unknown	Crew	Total
I	Tonsina River (Lower Tonsina River)	13	5	7	7	36	0	8	51
I	Klutina River	476	10	22	434	1,104	26	50	1,614
I	Gulkana River (reach unspecified)	29	4	5	47	56	3	3	109
I	Gulkana River (West Fork to Highway)	211	16	25	123	591	6	45	765
U	Tanana River	40	4	6	47	75	0	0	122
U	Other Lakes and Streams	132	6	12	48	482	5	19	554
V	Kanektok River (Quinhagak, Chosen)	1,428	8	51	42	2,846	8	5	2,901
V	Goodnews River	422	6	15	2	789	0	1	792
V	Holitna River	208	7	21	4	588	0	0	592
V	Other Streams - Kuskokwim Drainage below Aniak	336	6	19	31	742	2	121	896
V	Other Streams - Kuskowim Bay	132	5	16	0	289	4	10	303
V	Other Lakes and Streams	8	4	7	0	20	0	0	20
W	Streams of Seward Peninsula/Norton Sound	407	7	15	62	945	13	10	1,030
X	Streams of Northwest Alaska	53	5	5	4	172	0	11	187
Y	Streams of the Yukon River Drainage	333	6	14	32	832	74	8	946
	Other Lakes and Streams in AYK	3	2	2	0	6	0	0	6
AYK Total		4,231	71	194	883	9,573	141	291	10,888

Note: Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 08/07/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G4.–Freshwater logbook participation by region, 2006.

Region	Trips	Businesses[a]	Guides[a]	Angler Days				
				Resident	Nonres	Unknown	Crew	Total
SE	3,038	69	173	106	10,970	209	179	11,464
SC	39,512	528	1,224	9,742	111,956	1,234	2,123	125,055
AYK	4,231	71	194	883	9,573	141	291	10,888
Total	46,781	643	1,518	10,731	132,499	1,584	2,593	147,407

Note: Data are current as of 08/07/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G5.–Freshwater logbook effort and species kept by area and site, Southeast Alaska 2006.

Area	Description	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Dolly Varden	Grayling
			King	Coho	Sockeye					
A	Other Lakes	352	0	2	0	23	0	0	3	0
A	Other Streams	424	0	45	0	0	0	0	24	0
B	Harris River	88	0	4	0	0	0	0	0	0
B	Staney Creek	128	0	3	0	0	0	0	0	0
B	Thorne System Stream and Lake	147	0	49	0	0	0	0	13	0
B	Sweetwater System Stream and Lake	47	0	20	39	1	0	0	0	0
B	Other Lakes	96	0	24	2	0	0	0	7	0
B	Other Streams	192	0	37	9	0	1	0	3	0
C	All Lakes and Streams	147	0	22	0	11	4	0	3	0
D	Eva Lake and Stream	50	0	2	0	2	0	0	9	0
D	Unspecified Streams	81	0	19	0	2	0	0	53	0
D	Baranof Lake (Warm Springs Lake)	92	0	0	0	0	2	0	0	0
D	Deer Lake (Baranof Island)	30	0	39	0	0	2	0	1	0
D	Nakwasina Sound Streams	78	0	66	0	0	0	0	3	0
D	Other Lakes	41	0	0	24	7	0	0	0	0
D	Other Streams	754	0	20	14	17	7	0	52	1
E	Admiralty Island Streams	1,059	0	105	0	0	0	0	174	12
E	Other Lakes	96	0	28	0	7	0	0	16	0
E	Other Streams	1,650	0	77	24	3	0	0	5	0
G	Mud Bay Creek (Chichagof Island)	108	0	1	0	0	3	0	4	0
G	Trail River (Chichagof Island)	123	0	0	0	0	0	0	0	0
G	Chicken Creek (Chichagof Island)	27	0	0	0	0	0	2	12	0
G	North Chichagof Island Streams	52	0	81	5	0	0	0	13	0
H	Situk River (reach unspecified)	1,042	79	680	1,432	1	0	0	28	0
H	Akwe River	478	74	793	2	16	0	0	37	0
H	Tsiu River	1,494	0	3,179	0	0	0	2	5	0
H	Other Lakes and Streams	1,703	34	1,857	373	0	0	0	1	0
	Other Lakes and Streams in SE	885	6	18	350	23	0	0	165	12
SE Total		11,464	193	7,171	2,274	113	19	4	631	25

Note: Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 08/07/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G6.–Freshwater logbook effort and species released by area and site, Southeast Alaska 2006.

Area	Description	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Dolly Varden	Grayling
			King	Coho	Sockeye					
A	Other Lakes	352	0	2	4	1,326	34	0	352	23
A	Other Streams	424	4	26	0	74	119	1	192	0
B	Harris River	88	0	23	0	6	0	1	223	0
B	Staney Creek	128	0	25	1	7	3	20	237	0
B	Thorne System Stream and Lake	147	0	28	4	62	17	20	535	0
B	Sweetwater System Stream and Lake	47	0	0	98	11	2	0	3	0
B	Other Lakes	96	0	8	7	68	5	0	114	0
B	Other Streams	192	0	12	95	240	106	23	334	0
C	All Lakes and Streams	147	26	16	23	272	55	51	102	0
D	Eva Lake and Stream	50	0	0	0	157	2	0	39	0
D	Unspecified Streams	81	0	19	10	20	247	0	439	0
D	Baranof Lake (Warm Springs Lake)	92	0	0	0	530	4	0	3	0
D	Deer Lake (Baranof Island)	30	2	25	0	0	10	0	0	0
D	Nakwasina Sound Streams	78	0	0	0	0	0	0	262	0
D	Other Lakes	41	0	15	0	5	14	0	59	0
D	Other Streams	754	0	86	0	361	230	4	3,883	91
E	Admiralty Island Streams	1,059	0	374	8	35	4	0	3,443	50
E	Other Lakes	96	0	129	2	121	2	0	245	0
E	Other Streams	1,650	0	134	15	26	5	7	4,354	0
G	Mud Bay Creek (Chichagof Island)	108	0	2	0	1	1	0	608	14
G	Trail River (Chichagof Island)	123	0	7	0	0	0	0	255	0
G	Chicken Creek (Chichagof Island)	27	0	0	0	10	0	1	200	0
G	North Chichagof Island Streams	52	0	28	0	5	0	0	158	0
H	Situk River (reach unspecified)	1,042	127	965	926	1	16	1,210	59	67
H	Akwe River	478	105	2,293	1	186	4	73	154	4
H	Tsiu River	1,494	0	9,939	1	0	0	25	12	0
H	Other Lakes and Streams	1,703	69	4,289	836	6	0	0	10	0
	Other Lakes and Streams in SE	885	0	29	473	3	0	0	891	7
SE Total		11,464	333	18,474	2,504	3,533	880	1,436	17,166	256

Note: Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 08/07/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G7.–Freshwater logbook effort and species kept by area and site, Southcentral Alaska, 2006.

Area	Description	Angler Days	Salmon							
			King	Coho	Sockeye	Cutthroat	Rainbow	Steelhead	Dolly Varden	Grayling
J	East Prince William Sound Streams	462	6	337	29	0	0	0	11	0
J	Other Lakes and Streams	59	0	60	49	0	0	0	6	0
K	Knik Arm Streams	1,394	379	1,045	3	0	3	0	1	0
M	Willow Creek	187	4	39	0	0	0	0	0	0
M	Montana Creek	47	4	0	0	0	0	0	0	0
M	Clear Creek (Chunilna Creek)	323	81	167	0	0	2	0	0	0
M	Little Willow Creek	137	12	161	0	0	0	0	0	0
M	Kashwitna River	222	110	181	3	0	0	0	0	0
M	Talkeetna River	1,820	390	405	4	0	1	0	15	0
M	Other Lakes and Streams - East Susitna Drainage	185	19	29	0	0	0	0	0	4
M	Lake Creek	3,324	682	1,831	23	1	41	0	0	5
M	Talachulitna River	1,223	236	666	2	0	4	0	1	0
M	Fish Lake Creek and Fish Lakes	163	14	0	0	0	0	0	0	0
M	Yentna River Drainage (Remainder)	486	110	176	0	0	26	0	0	0
M	Yentna River	548	143	110	6	0	8	0	2	3
M	Deshka River (Kroto Creek) above weir	344	259	13	0	0	1	0	0	0
M	Deshka River (Kroto Creek) below weir	1,246	713	593	0	0	2	0	0	0
M	Indian Creek (into Yentna near Fish Lakes)	396	97	566	0	0	0	0	0	0
M	Other Lakes - West Susitna Drainage	24	0	0	12	0	0	0	0	0
M	Other Streams - West Susitna Drainage	147	12	122	3	0	0	0	0	0
M	Other Lakes and Streams	82	2	37	6	0	0	0	3	4
N	Chuitna River	407	117	351	19	1	1	0	0	0
N	Big River Lakes	3,497	12	6,329	2,444	0	0	0	3	0
N	Crescent Lake	77	0	33	31	0	0	0	11	0
N	Crescent River (Grecian River)	469	0	756	468	0	0	0	23	0
N	Kamishak River	495	3	1,046	26	0	6	0	45	0
N	Kustatan River	1,122	2	2,841	37	0	0	0	18	0
N	Bachatna Creek	52	0	147	0	0	0	0	0	0
N	Other Lakes and Streams	472	8	436	9	0	1	0	32	0
N	Wolverine Creek (by Big River Lakes)	3,090	7	1,819	5,241	0	0	0	1	0
P	Anchor River	172	15	50	14	0	0	0	23	0
P	Deep Creek	107	4	44	0	0	0	0	24	0
P	Russian River	182	0	8	127	0	4	0	0	0
P	Crescent Lake	70	0	0	0	0	4	0	0	19
P	Quartz Creek	49	0	0	0	0	0	0	1	0
P	Kasilof River below Highway	6,563	1,883	1,581	180	0	1	6	125	3
P	Kasilof River above Highway	158	7	96	61	0	1	3	2	0
P	Kasilof River reach not specified	182	50	35	10	0	1	0	6	0
P	Other Lakes	227	4	0	7	0	87	0	1	0
P	Other Streams	602	105	325	9	0	0	0	50	0

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Area	Description	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Dolly Varden	Grayling
			King	Coho	Sockeye					
P	Kenai River - Cook Inlet to Soldotna Bridge	33,331	8,099	5,422	1,210	0	227	0	174	17
P	Kenai River - Soldotna Bridge to Moose R	2,843	475	800	1,121	0	209	0	13	1
P	Kenai River - Moose River to Skilak Outlet	3,339	100	1,418	1,541	0	91	0	98	0
P	Kenai River - Skilak Inlet to Kenai Lake	6,233	16	176	2,709	0	95	0	70	0
P	Kenai River - reach not specified	285	48	20	130	0	0	0	1	0
Q	Buskin River	54	0	91	0	0	0	0	8	0
Q	Pasagshak River	49	0	10	24	0	0	0	4	0
Q	Roadside Streams	272	1	97	49	0	0	0	29	0
Q	Other Remote Lakes and Streams	1,425	124	366	668	0	2	1	202	0
Q	Roadside Lakes	172	9	28	6	0	1	0	97	0
Q	Olds River	61	0	8	0	0	0	0	1	0
Q	Ayakulik River (sometimes called Red River)	954	54	502	528	0	0	2	111	0
Q	Saltery River	867	0	507	108	0	0	0	359	1
Q	Browns Lagoon River	49	0	2	0	0	0	0	5	0
Q	Afognak Island Lakes and Streams	56	0	70	10	0	1	0	0	0
Q	Chiniak River	24	0	1	0	0	0	0	0	0
Q	Zachar Bay Streams	124	0	227	0	0	0	0	7	0
Q	Karluk Lake and River above Weir	986	587	81	65	0	3	7	61	0
Q	Karluk Lagoon and River below Weir	795	134	1,141	654	5	0	3	29	0
Q	Other Streams	86	0	0	1	0	0	0	125	0
R	Naknek River and Tributaries	1,543	496	828	288	0	29	0	9	0
R	Naknek Lake	234	0	0	5	0	0	0	0	0
R	Brooks River	848	0	0	0	0	36	0	0	0
R	Ugashik System	186	0	38	2	0	0	0	33	1
R	Becharof System	1,129	20	1,485	163	0	2	0	41	3
R	Brooks Lake	77	2	0	4	0	5	0	0	0
R	Chignik River	181	245	0	0	0	0	0	0	0
R	American Creek	1,258	0	0	0	0	16	0	25	0
R	Naknek River (Rapids Camp upstream to Naknek Lk)	1,205	110	745	965	0	13	0	0	0
R	Naknek River (dwnstream from Rapids Camp)	756	435	208	160	0	1	0	0	0
R	Other Alaska Peninsula / Aleutian Lakes and Streams	1,681	327	1,552	321	0	1	0	56	1
R	Other Streams	417	0	220	19	0	26	0	7	0
S	Kvichak River	2,160	34	361	1,145	0	91	0	0	62
S	Lower Talarik Creek	165	0	5	0	0	0	0	0	0
S	Copper River (Lake Iliamna Area)	1,282	0	0	394	0	56	0	0	0
S	Newhalen River	275	0	15	593	0	0	0	0	16
S	Alagnak (Branch) River	5,093	684	815	3,347	0	160	0	6	75
S	Lake Clark	247	0	0	10	0	0	0	4	2
S	Iliamna River	431	8	0	634	0	3	0	0	0

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Area	Description	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Dolly Varden	Grayling
			King	Coho	Sockeye					
S	Kukaklek Lake	24	0	0	41	0	0	0	0	0
S	Kulik River	1,134	0	1	0	0	0	0	0	0
S	Iliamna Lake	223	0	10	103	0	10	0	0	0
S	Nonvianuk Lake	65	0	0	0	0	6	0	0	0
S	Nonvianuk River (into Alagnak)	630	0	1	13	0	20	0	0	0
S	Tazimina River	168	0	0	0	0	0	0	0	10
S	Moraine Creek	1,631	0	0	10	0	61	0	1	4
S	Battle River	281	0	0	0	0	0	0	0	0
S	Funnel Creek	112	0	0	0	0	1	0	0	0
S	Nanuktuk Creek	239	0	0	0	0	0	0	0	0
S	Long Lake	87	0	0	0	0	0	0	0	0
S	Kijik River	72	0	0	84	0	0	0	0	0
S	Kijik Lake	28	0	0	38	0	0	0	0	0
S	Gibraltar River	330	0	5	96	0	31	0	0	0
S	Kukaklek River (Big Ku) (into Alagnak)	905	0	6	129	0	17	0	0	0
S	Little Kulik (into Nanuktuk Creek)	59	0	0	0	0	0	0	0	0
S	Other Lakes and Streams	41	0	42	0	0	13	0	1	0
T	Nushagak River System	639	179	46	1	0	0	0	14	0
T	Wood River Lakes System	641	2	262	38	0	1	0	17	0
T	Tikchik-Nuyakuk Lake System	282	8	0	33	0	2	0	1	44
T	Togiak River System	2,485	1,036	1,996	136	0	13	0	97	2
T	Mulchatna River	416	46	152	49	0	20	0	11	31
T	Agulowak River	1,035	0	43	1,247	0	17	0	26	1
T	Aleknagik Lake	374	0	128	122	0	0	0	6	0
T	Kulukak River	329	4	97	0	0	0	0	0	0
T	Agulukpak River	599	0	0	71	0	12	0	4	12
T	Nushagak River - upstream of Mulchatna River	741	35	271	24	0	4	0	1	2
T	Wood River	137	0	241	92	0	6	0	2	0
T	Nushagak River - Black Point to Sonar Site	3,743	2,074	162	15	0	0	0	3	0
T	Nushagak River - Sonar Site to Mulchatna	4,816	2,905	394	15	0	13	0	7	1
T	Other Lakes and Streams	466	16	392	19	0	0	0	0	0
	Other Lakes and Streams in SC	338	0	213	3	0	3	0	38	0
	SC Total	125,055	23,803	44,136	28,076	7	1,512	22	2,208	324

Note: Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 08/07/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G8.–Freshwater logbook effort and species released by area and site, Southcentral Alaska, 2006.

Area	Description	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Dolly Varden	Grayling
			King	Coho	Sockeye					
J	East Prince William Sound Streams	462	36	3,574	54	18	34	1	91	0
J	Other Lakes and Streams	59	0	37	120	4	0	0	131	0
K	Streams	1,394	72	625	24	6	3	0	10	0
M	Willow Creek	187	26	71	0	0	1,273	0	4	205
M	Montana Creek	47	3	0	0	0	398	0	0	8
M	Clear Creek (Chunilna Creek)	323	45	166	5	0	48	0	25	0
M	Little Willow Creek	137	28	212	0	0	16	0	0	0
M	Kashwitna River	222	63	52	20	0	33	0	0	0
M	Talkeetna River	1,820	517	575	15	1	281	3	696	140
M	Other Lakes and Streams - East Susitna Drainage	185	12	11	0	0	204	0	0	40
M	Lake Creek	3,324	1,131	1,541	51	2	2,512	3	4	857
M	Talachulitna River	1,223	903	3,019	46	0	1,387	0	72	297
M	Fish Lake Creek and Fish Lakes	163	9	0	0	0	1	0	0	0
M	Yentna River Drainage (Remainder)	486	154	690	20	0	357	0	27	120
M	Yentna River	548	188	14	3	14	222	0	17	26
M	Deshka River (Kroto Creek) above weir	344	159	22	2	0	519	0	0	5
M	Deshka River (Kroto Creek) below weir	1,246	179	1,391	0	2	69	0	0	1
M	Indian Creek (into Yentna near Fish Lakes)	396	71	215	3	0	1	0	0	0
M	Other Lakes - West Susitna Drainage	24	0	0	0	0	0	0	0	0
M	Other Streams - West Susitna Drainage	147	15	1,082	0	0	29	0	0	65
M	Other Lakes and Streams	82	6	25	9	0	6	0	0	187
N	Chuitna River	407	258	971	0	0	20	0	2	0
N	Big River Lakes	3,497	51	2,924	6,447	0	0	0	43	0
N	Crescent Lake	77	1	29	26	0	0	0	563	0
N	Crescent River (Grecian River)	469	4	296	148	0	0	0	943	0
N	Kamishak River	495	36	2,811	42	0	0	0	2,498	0
N	Kustatan River	1,122	0	1,609	12	0	0	0	238	3
N	Bachatna Creek	52	0	397	0	0	0	0	14	0
N	Other Lakes and Streams	472	60	1,481	15	0	48	0	943	0
N	Wolverine Creek (by Big River Lakes)	3,090	2	823	7,719	0	1	0	17	0
P	Anchor River	172	11	20	1	0	32	10	170	12
P	Deep Creek	107	3	46	0	0	0	4	39	0
P	Russian River	182	0	11	203	0	864	0	110	0
P	Crescent Lake	70	0	0	0	0	198	0	32	380
P	Quartz Creek	49	0	0	20	0	29	0	1,080	0
P	Kasilof River below Highway	6,563	1,501	71	37	2	200	217	1,039	23
P	Kasilof River above Highway	158	25	0	0	0	7	6	17	4
P	Kasilof River reach not specified	182	39	5	3	0	37	0	37	0
P	Other Lakes	227	20	0	29	0	1,217	33	10	128
P	Other Streams	602	322	1,096	5	0	213	6	468	0

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Area	Description	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Dolly Varden	Grayling
			King	Coho	Sockeye					
P	Kenai River - Cook Inlet to Soldotna Bridge	33,331	5,746	448	390	0	3,997	0	2,536	23
P	Kenai River - Soldotna Bridge to Moose R	2,843	424	200	959	0	5,579	0	1,563	3
P	Kenai River - Moose River to Skilak Outlet	3,339	127	503	1,329	0	14,144	0	8,978	278
P	Kenai River - Skilak Inlet to Kenai Lake	6,233	21	128	3,478	0	21,475	0	19,750	818
P	Kenai River - reach not specified	285	23	4	6	0	771	0	799	0
Q	Buskin River	54	0	12	0	0	0	0	125	0
Q	Pasagshak River	49	0	2	7	0	0	0	44	0
Q	Roadside Streams	272	4	122	25	0	0	0	1,364	0
Q	Other Remote Lakes and Streams	1,425	18	2,374	488	0	370	295	2,975	12
Q	Roadside Lakes	172	70	129	40	0	0	6	271	0
Q	Olds River	61	5	18	0	0	0	0	3	0
Q	Ayakulik River (sometimes called Red River)	954	898	1,440	1,928	0	8	550	930	0
Q	Saltery River	867	0	625	108	0	29	14	2,363	0
Q	Browns Lagoon River	49	0	6	0	0	0	0	25	0
Q	Afognak Island Lakes and Streams	56	0	13	14	0	16	0	266	0
Q	Chiniak River	24	0	2	0	0	0	0	4	0
Q	Zachar Bay Streams	124	20	69	0	0	0	0	7	0
Q	Karluk Lake and River above Weir	986	1,315	301	795	0	19	517	2,361	1
Q	Karluk Lagoon and River below Weir	795	25	1,375	244	0	0	19	61	0
Q	Other Streams	86	0	6	0	0	1	0	452	0
R	Naknek River and Tributaries	1,543	716	827	402	0	3,750	0	1,601	371
R	Naknek Lake	234	0	4	52	0	1,937	0	579	3
R	Brooks River	848	0	11	520	0	7,608	5	39	9
R	Ugashik System	186	70	39	30	0	0	0	1,639	629
R	Becharof System	1,129	160	3,258	415	0	1,044	0	5,892	1,265
R	Brooks Lake	77	1	2	7	0	490	0	1	0
R	Chignik River	181	562	42	0	0	0	0	10	0
R	American Creek	1,258	0	0	93	0	6,506	0	13,852	163
R	Naknek River (Rapids Camp upstream to Naknek Lk)	1,205	248	250	1,110	0	1,891	0	196	70
R	Naknek River (dwnstream from Rapids Camp)	756	389	70	268	0	189	0	5	3
R	Other Alaska Peninsula / Aleutian Lakes and Streams	1,681	1,705	6,516	873	0	111	338	4,964	45
R	Other Streams	417	38	2,139	265	0	542	0	1,512	10
S	Kvichak River	2,160	227	1,409	3,734	0	18,008	0	154	2,715
S	Lower Talarik Creek	165	0	78	46	0	1,458	0	1	22
S	Copper River (Lake Iliamna Area)	1,282	0	3	1,695	0	10,783	0	133	1
S	Newhalen River	275	1	32	585	0	191	0	19	524
S	Alagnak (Branch) River	5,093	3,972	3,771	5,496	0	14,629	0	297	3,844
S	Lake Clark	247	0	0	10	0	0	0	62	1,103
S	Iliamna River	431	19	0	1,614	0	536	0	2,712	156

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Area	Description	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Dolly Varden	Grayling
			King	Coho	Sockeye					
S	Kukaklek Lake	24	0	0	205	0	115	0	0	0
S	Kulik River	1,134	0	0	214	0	19,517	0	11	0
S	Iliamna Lake	223	0	21	80	0	1,573	0	1	32
S	Nonvianuk Lake	65	0	3	2	0	826	0	0	0
S	Nonvianuk River (into Alagnak)	630	8	12	56	0	6,407	0	1	61
S	Tazimina River	168	0	0	35	0	789	0	8	2,359
S	Moraine Creek	1,631	21	0	287	0	17,694	0	104	285
S	Battle River	281	0	0	174	0	1,689	0	0	163
S	Funnel Creek	112	0	0	3	0	1,448	0	17	0
S	Nanuktuk Creek	239	0	0	28	0	3,433	0	423	45
S	Long Lake	87	0	0	0	0	0	0	0	7
S	Kijik River	72	0	0	57	0	0	0	0	904
S	Kijik Lake	28	0	0	53	0	0	0	1	52
S	Gibraltar River	330	0	20	249	0	6,014	1	0	26
S	Kukaklek River (Big Ku) (into Alagnak)	905	1	55	526	0	13,531	0	24	167
S	Little Kulik (into Nanuktuk Creek)	59	0	1	2	0	1,133	0	64	2
S	Other Lakes and Streams	41	0	103	4	0	284	0	178	0
T	Nushagak River System	639	142	132	28	0	3,163	0	1,384	3,707
T	Wood River Lakes System	641	504	1,320	250	0	470	0	515	735
T	Tikchik-Nuyakuk Lake System	282	29	157	180	0	228	0	48	1,585
T	Togiak River System	2,485	6,022	11,715	117	0	1,004	5	2,420	109
T	Mulchatna River	416	206	475	53	0	1,584	0	276	1,110
T	Agulowak River	1,035	18	50	3,088	0	7,843	0	2,236	2,318
T	Aleknagik Lake	374	0	560	1,271	0	31	0	1,143	72
T	Kulukak River	329	471	1,947	57	0	40	0	18	0
T	Agulukpak River	599	0	0	524	0	3,986	0	1,200	1,134
T	Nushagak River - upstream of Mulchatna River	741	136	440	20	0	4,427	0	2,044	2,774
T	Wood River	137	2	312	123	0	6	0	1	1
T	Nushagak River - Black Point to Sonar Site	3,743	12,885	379	15	0	2	0	10	1
T	Nushagak River - Sonar Site to Mulchatna	4,816	14,514	1,598	34	0	246	0	44	204
T	Other Lakes and Streams	466	163	2,011	228	0	348	0	33	402
	Other Lakes and Streams in SC	338	35	61	0	0	257	0	433	37
	SC Total	125,055	57,911	73,512	50,068	49	224,429	2,033	100,522	32,861

Note: Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 08/07/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G9.–Freshwater logbook effort and species kept by area and site, AYK Alaska, 2006.

Area	Description	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Dolly Varden	Grayling
			King	Coho	Sockeye					
I	Tonsina River (Lower Tonsina River)	51	51	18	0	0	0	0	0	0
I	Klutina River	1,614	1,614	842	0	913	0	1	0	154
I	Gulkana River (reach unspecified)	109	109	93	0	5	0	0	0	0
I	Gulkana River (West Fork to Highway)	765	765	385	0	63	0	3	0	0
U	Tanana River	122	122	6	0	0	0	0	0	0
U	Other Lakes and Streams	554	554	4	58	0	0	1	0	0
V	Kanektok River (Quinhagak, Chosen)	2,901	2,901	424	1,373	247	0	5	0	34
V	Goodnews River	792	792	76	238	109	0	0	0	21
V	Holitna River	592	592	135	112	10	0	0	0	12
V	Other Streams - Kuskokwim Drainage below Aniak	896	896	5	43	0	0	7	0	23
V	Other Streams - Kuskowim Bay	303	303	1	4	6	0	3	0	5
V	Other Lakes and Streams	20	20	0	0	0	0	0	0	0
W	Streams of Seward Peninsula/Norton Sound	1,030	1,030	130	1,280	0	0	0	0	319
X	Streams of Northwest Alaska	187	187	0	0	0	0	0	0	21
Y	Streams of the Yukon River Drainage	946	946	79	330	0	0	0	0	5
	Other Lakes and Streams in AYK	6	6	0	0	0	0	7	0	0
	AYK Total	10,888	2,198	3,438	1,353	0	27	0	594	210

Note: Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 08/07/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G10.–Freshwater logbook effort and species released by area and site, AYK Alaska, 2006.

Area	Description	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Dolly Varden	Grayling
			King	Coho	Sockeye					
I	Tonsina River (Lower Tonsina River)	51	72	0	0	0	0	0	3	0
I	Klutina River	1,614	641	0	528	0	0	0	55	47
I	Gulkana River (reach unspecified)	109	157	0	0	0	7	0	0	200
I	Gulkana River (West Fork to Highway)	765	521	0	52	0	54	6	0	535
U	Tanana River	122	13	106	0	0	0	0	0	1,569
U	Other Lakes and Streams	554	0	38	0	0	629	0	38	769
V	Kanektok River (Quinhagak, Chosen)	2,901	2,333	6,576	1,709	0	7,532	0	17,685	1,356
V	Goodnews River	792	491	2,303	200	0	778	0	2,814	105
V	Holitna River	592	449	174	59	0	1	0	893	421
V	Other Streams - Kuskokwim Drainage below Aniak	896	824	1,485	172	0	3,704	0	5,920	2,948
V	Other Streams - Kuskowim Bay	303	66	1,568	37	1	1,477	0	1,359	205
V	Other Lakes and Streams	20	0	3	0	0	16	0	0	0
W	Streams of Seward Peninsula/Norton Sound	1,030	533	10,486	6	0	0	0	1,697	1,674
X	Streams of Northwest Alaska	187	0	0	0	0	0	0	487	310
Y	Streams of the Yukon River Drainage	946	318	2,305	47	5	1	0	238	3,782
	Other Lakes and Streams in AYK	6	0	0	0	0	12	0	0	0
	AYK Total	10,888	6,418	25,044	2,810	6	14,211	6	31,189	13,921

Note: Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 08/07/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G11.–Freshwater logbook effort and species kept by region, Statewide, 2006.

Region	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Dolly Varden	Grayling
		King	Coho	Sockeye					
SE	11,464	193	7,171	2,274	113	19	4	631	25
SC	125,055	23,803	44,136	28,076	7	1,512	22	2,208	324
AYK	10,888	2,198	6,418	3,438	0	27	0	594	210
Total	147,407	26,194	54,745	31,703	120	1,558	26	3,433	559

Note: Data are current as of 08/07/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G12.–Freshwater logbook effort and species released by region, Statewide, 2006.

Region	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Dolly Varden	Grayling
		King	Coho	Sockeye					
SE	11,464	333	18,474	2,504	3,533	880	1,436	17,166	256
SC	125,055	57,911	73,512	50,068	49	224,429	2,033	100,522	32,861
AYK	10,888	6,418	25,044	2,810	6	14,211	6	31,189	13,921
Total	147,407	64,662	117,030	55,382	3,588	239,520	3,475	148,877	47,038

Note: Data are current as of 08/07/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G13.–Freshwater logbook participation by site code and area, Southeast Alaska, 2007.

Area	Description	Trips	Businesses[a]	Angler Days						
				Guides[a]	Resident	Nonres	Comped	Unknown	Crew	Total
A	Other Lakes	69	4	12	3	341	1	0	0	345
A	Other Streams	182	6	17	5	590	3	4	0	602
B	Harris River	27	9	11	0	64	0	0	0	64
B	Luck Lake	17	4	6	0	47	0	0	0	47
B	Staney Creek	63	6	8	2	151	0	0	0	153
B	Thorne System Stream and Lake	43	8	11	2	117	1	0	0	120
B	Other Lakes	13	4	4	1	26	0	0	0	27
B	Other Streams	82	13	16	6	206	0	0	0	212
C	Lakes and Streams	53	11	12	0	163	6	1	5	175
D	Plotnikof and Rezanof System Streams and Lakes	8	4	6	1	39	0	0	0	40
D	Eva Lake and Stream	27	5	11	1	101	0	0	5	107
D	Sitkoh Creek and Lake (Chichagof Island)	10	5	6	1	23	0	0	0	24
D	Unspecified Streams	14	6	7	2	43	0	0	0	45
D	Katlian River	100	4	8	1	289	0	7	0	297
D	Nakwasina Sound Streams	54	4	8	0	157	0	1	0	158
D	Baranof System	61	7	19	10	193	2	1	1	207
D	Other Lakes	30	6	13	0	91	0	3	1	95
D	Other Streams	127	13	33	6	467	2	3	12	490
E	Dupont to Echo Cove (Juneau Road System)	21	5	9	0	62	0	0	1	63
E	Admiralty Island Streams	131	4	15	0	529	0	0	0	529
E	Chaik Bay Streams	51	4	12	0	188	0	0	0	188
E	Other Lakes and Streams	376	7	31	7	1,413	2	0	7	1,429
G	Mud Bay Creek (Chichagof Island)	26	7	9	0	117	2	0	0	119
G	Trail River (Chichagof Island)	18	5	6	3	92	0	1	8	104
G	North Chichagof Island Streams	26	4	11	0	116	0	0	0	116
G	Other Lakes and Streams	20	5	7	4	68	0	0	0	72
H	Situk River (reach unspecified)	512	7	15	77	1,131	11	9	8	1,236
H	Akwe River	187	4	8	79	671	1	11	59	821
H	Tsiu River	365	5	17	63	1,433	2	3	6	1,507
H	Other Lakes and Streams	422	13	23	25	1,675	11	4	4	1,719
	Other Lakes and Streams in SE	121	2	6	1	553	0	6	0	560
Southeast Total		3,256	73	177	300	11,156	44	54	117	11,671

Note: Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 08/07/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G14.–Freshwater logbook participation by site code and area, Southcentral Alaska, 2007.

Area	Description	Trips	Businesses[a]	Guides[a]	Angler Days					
					Resident	Nonres	Comped	Unknown	Crew	Total
J	Delight Lake	6	6	6	2	23	0	0	0	25
J	Other Lakes and Streams	90	9	12	38	368	1	0	9	416
K	Knik Arm Lakes and Streams	456	13	19	508	1,130	9	21	16	1,684
L	Anchorage Area Lakes and Streams	97	4	4	32	278	12	6	0	328
M	Willow Creek	93	8	11	42	153	1	1	3	200
M	Clear Creek (Chunilna Creek)	195	9	20	77	751	0	7	2	837
M	Sheep Creek	12	5	5	3	27	8	0	0	38
M	Little Willow Creek	28	5	4	39	58	0	4	0	101
M	Indian River (into Susitna)	30	4	6	12	93	0	1	0	106
M	Talkeetna River	363	9	24	145	1,417	2	32	10	1,606
M	Other Lakes - East Susitna Drainage	20	5	5	11	50	1	0	0	62
M	Other Streams - East Susitna Drainage	139	10	14	84	325	5	4	3	421
M	Lake Creek	1,344	21	58	367	3,444	14	10	67	3,902
M	Talachulitna River	425	10	30	64	1,342	8	8	8	1,430
M	Alexander Lake	6	4	6	0	22	0	0	1	23
M	Donkey Creek, Donkey Creek Slough	40	5	9	9	119	6	0	0	134
M	Fish Lake Creek and Fish Lakes	15	4	11	0	37	2	1	0	40
M	Yentna River Drainage (Remainder)	298	14	34	15	947	0	0	4	966
M	Yentna River	52	4	11	20	110	0	0	0	130
M	Deshka River (Kroto Creek) above weir	34	5	5	44	97	6	1	2	150
M	Deshka River (Kroto Creek) below weir	390	15	21	621	861	4	25	5	1,516
M	Indian Creek (into Yentna near Fish Lakes)	59	4	12	43	181	0	0	29	253
M	Other Lakes and Streams - West Susitna Drainage	70	10	15	42	190	0	0	5	237
M	Other Lakes and Streams	66	8	16	12	194	0	0	2	208
N	Chuitna River	136	15	24	35	508	1	3	1	548
N	Theodore River	32	4	5	13	77	2	0	4	96
N	Big River Lakes	959	30	44	196	3,395	0	33	3	3,627
N	Crescent Lake	33	14	18	11	138	0	0	0	149
N	Crescent River (Grecian River)	139	6	8	4	458	0	0	2	464
N	Kamishak River	143	7	28	8	336	1	1	8	354
N	Kustatan River	330	23	45	105	1,305	1	10	3	1,424
N	Bachatna Creek	19	7	9	8	65	0	1	0	74
N	Other Sites North Forelands to Susitna Drainage	23	5	5	0	93	0	0	0	93
N	Other Sites (South of North Forelands)	83	13	20	6	251	0	0	1	258
N	Wolverine Creek (by Big River Lakes)	915	24	46	150	3,374	5	62	3	3,594
P	Anchor River	46	5	9	9	149	2	6	7	173
P	Ninilchik River	100	5	8	5	443	13	2	12	475
P	Russian River	91	12	17	16	221	0	1	0	238
P	Swanson River Canoe Route Lakes	23	4	5	3	52	0	0	20	75
P	Crescent Creek	14	6	6	0	50	0	0	0	50

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Area	Description	Trips	Businesses[a]	Guides[a]	Angler Days					
					Resident	Nonres	Comped	Unknown	Crew	Total
P	Crescent Lake	8	5	7	0	26	0	0	0	26
P	Packers Lake (Creek) (Kalgin Island)	18	4	7	3	52	0	1	0	56
P	Quartz Creek	21	9	12	5	48	0	3	1	57
P	Russian Lake (Upper and Lower)	6	4	5	14	22	0	0	0	36
P	Kasilof River below Highway	2,022	106	152	844	5,762	47	38	70	6,761
P	Kasilof River above Highway	30	13	14	16	70	1	2	0	89
P	Kasilof River reach not specified	69	20	25	28	188	0	2	2	220
P	Other Lakes	38	8	8	7	90	0	0	12	109
P	Other Streams	197	12	24	30	600	10	1	14	655
P	Kenai River - Cook Inlet to Soldotna Bridge	8,439	221	308	4,179	25,525	92	276	67	30,139
P	Kenai River - Soldotna Bridge to Moose R	888	67	97	302	2,558	5	9	73	2,947
P	Kenai River - Moose River to Skilak Outlet	1,260	81	117	541	3,310	15	33	24	3,923
P	Kenai River - Skilak Inlet to Kenai Lake	1,981	41	78	670	5,434	24	105	70	6,303
P	Kenai River - reach not specified	553	47	58	184	1,626	8	18	4	1,840
Q	Buskin River	21	4	4	5	60	0	0	2	67
Q	Pasagshak River	36	6	6	8	104	0	0	3	115
Q	Roadside Streams	69	7	11	3	201	0	0	0	204
Q	Other Remote Lakes and Streams	272	17	29	37	913	0	1	57	1,008
Q	Roadside Lakes	40	5	9	0	148	0	0	0	148
Q	American River	10	4	4	2	26	0	0	1	29
Q	Dog Salmon Creek (Frazer River)	45	5	8	5	161	0	1	4	171
Q	Monashka Creek	4	4	4	1	10	0	1	0	12
Q	Olds River	16	6	6	5	49	0	0	1	55
Q	Ayakulik River (sometimes called Red River)	290	5	11	105	903	1	3	29	1,041
Q	Saltery River	228	9	18	31	790	1	5	17	844
Q	Afognak Island Lakes and Streams	9	5	5	5	33	0	0	2	40
Q	Zachar Bay Streams	61	6	13	8	188	0	0	1	197
Q	Karluk Lake and River above Weir	170	10	19	8	964	1	18	3	994
Q	Karluk Lagoon and River below Weir	153	10	18	2	864	1	0	3	870
Q	Unspecified Streams	12	4	6	4	41	0	1	1	47
R	Naknek River and Tributaries	699	21	54	217	1,594	3	8	74	1,896
R	Naknek Lake	95	4	10	36	339	8	0	10	393
R	Brooks River	328	24	78	43	784	1	3	25	856
R	Ugashik System	167	20	41	18	409	0	4	3	434
R	Becharof System	259	18	45	16	712	2	4	22	756
R	Brooks Lake	33	6	9	3	94	0	0	0	97
R	Chignik River	89	8	11	36	196	9	1	0	242
R	American Creek	460	19	65	51	1,091	2	27	13	1,184
R	Naknek River (Rapids Camp upstream to Naknek Lk)	548	14	35	83	1,213	0	8	121	1,425
R	Naknek River (dwnstream frm Rapids Camp)	270	12	27	34	573	0	6	47	660

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Area	Description	Trips	Businesses[a]	Guides[a]	Angler Days					
					Resident	Nonres	Comped	Unknown	Crew	Total
R	Other Alaska Peninsula / Aleutian Lakes and Streams	745	19	52	63	2,197	12	2	17	2,291
R	Other Lakes and Streams	64	13	28	3	181	0	0	7	191
S	Kvichak River	922	23	100	76	1,798	16	4	34	1,928
S	Lower Talarik Creek	40	8	13	1	117	4	0	1	123
S	Copper River (Lake Iliamna Area)	492	9	35	5	1,193	22	0	1	1,221
S	Newhalen River	137	8	25	29	329	26	1	1	386
S	Alagnak (Branch) River	2,157	24	102	55	4,641	1	26	35	4,758
S	Lake Clark	106	9	23	10	312	23	0	0	345
S	Kukaklek Lake	11	6	9	0	29	0	0	0	29
S	Kulik River	387	19	56	36	1,011	7	1	0	1,055
S	Lake Iliamna	282	11	37	11	711	22	2	5	751
S	Nonvianuk Lake	26	6	6	4	99	1	1	6	111
S	Nonvianuk River (into Alagnak)	135	15	40	14	342	0	4	13	373
S	Tazimina River	59	8	18	2	161	0	0	0	163
S	Moraine Creek	653	24	104	36	1,504	22	1	52	1,615
S	Upper Talarik Creek	28	4	14	1	99	3	0	0	103
S	Battle River	129	10	33	8	342	0	0	31	381
S	Funnel Creek	21	5	14	1	50	0	0	0	51
S	Nanuktuk Creek	100	10	28	3	198	0	2	0	203
S	Long Lake	52	6	12	0	122	5	0	0	127
S	Kijik Lake	5	4	4	0	15	0	0	2	17
S	Gibraltar River	127	10	31	3	316	17	1	1	338
S	Kukaklek River (Big Ku) (into Alagnak)	378	14	58	44	750	6	7	8	815
S	Little Kulik (into Nanuktuk Creek)	41	7	16	0	83	0	0	0	83
S	Other Lakes	7	6	6	0	24	0	0	0	24
S	Other Streams	42	8	15	0	104	1	0	0	105
T	Nushagak River System	180	18	31	36	449	2	1	1	489
T	Wood River Lakes System	326	13	54	12	715	2	0	4	733
T	Tikchik-Nuyakuk Lake System	146	6	23	0	293	0	0	0	293
T	Togiak River System	1,032	7	69	19	2,184	7	0	1	2,211
T	Mulchatna River	102	15	19	14	366	0	2	4	386
T	Agulowak River	482	10	54	10	943	3	1	0	957
T	Aleknagik Lake	123	6	17	2	291	0	0	0	293
T	Agulukpak River	351	11	50	4	677	2	0	2	685
T	Nushagak River - upstream of Mulchatna River	362	6	34	3	710	2	0	0	715
T	Wood River	43	4	14	1	99	0	0	0	100
T	Nushagak River - Black Point to Sonar Site	1,321	31	132	193	3,638	19	6	26	3,882
T	Nushagak River - Sonar Site to Mulchatna	1,177	34	120	188	3,511	12	2	37	3,750
T	Other Lakes and Streams	419	8	32	3	836	0	0	1	840
	Other Lakes and Streams in SC	5	4	4	0	15	0	0	0	15
SC Total		40,543	528	1,272	11,278	112,358	572	883	1,296	126,387

Note: Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 08/07/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G15.–Freshwater logbook participation by site code and area, AYK Alaska, 2007.

Area	Description	Trips	Businesses[a]	Guides[a]	Angler Days					
					Resident	Nonres	Comped	Unknown	Crew	Total
I	Gulkana River (Highway to Copper River)	17	4	4	14	54	0	0	0	68
I	Klutina River	500	11	28	428	1,181	18	0	30	1,657
I	Gulkana River (West Fork to Highway)	305	11	21	179	780	42	3	41	1,045
I	Other Lakes and Streams	43	5	9	42	92	0	4	3	141
U	Other Lakes	215	6	10	18	1,165	18	3	35	1,239
U	Other Streams	96	7	16	46	232	6	4	28	316
V	Kanektok River (Quinhagak, Chosen)	1,361	8	55	43	2,663	16	0	0	2,722
V	Goodnews River	616	6	19	8	1,130	1	0	0	1,139
V	Aniak River	275	4	17	6	645	6	8	0	665
V	Holitna River	184	6	18	4	421	0	10	5	440
V	Streams - Kuskokwim Drainages above Aniak	15	5	12	0	31	0	1	4	36
V	Lakes - Kuskokwim Drainages above Aniak	4	4	4	0	9	0	0	0	9
V	Kuskokwim Drainage below Aniak	142	6	20	5	328	6	1	11	351
V	Lakes and Streams - Kuskokwim Bay	86	6	14	1	212	0	0	0	213
W	Streams of Seward Peninsula/Norton Sound	409	5	14	89	793	3	0	0	885
Y	Streams of the Yukon River Drainage	609	7	22	28	1,225	8	0	12	1,273
	Other Lakes and Streams in AYK	21	3	3	17	45	1	0	0	63
AYK Total		4,898	68	224	928	11,006	125	34	169	12,262

Note: Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 08/07/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G16.–Freshwater logbook participation by region, 2007.

Region	Trips	Businesses[a]	Guides[a]	Angler Days					
				Resident	Nonres	Comped	Unknown	Crew	Total
SE	3,256	73	177	300	11,156	44	54	117	11,671
SC	40,543	528	1,272	11,278	112,358	573	883	1,296	126,388
AYK	4,898	68	224	928	11,006	125	34	169	12,262
Total	48,697	645	1,581	12,506	134,520	741	971	1,582	150,320

Note: Data are current as of 08/07/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G17.–Freshwater logbook effort and species kept by area and site, Southeast Alaska 2007.

Area	Description	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Lake trout	Dolly Varden	Grayling	Pike	Sheefish
			King	Coho	Sockeye								
A	Other Lakes	345	0	0	0	3	0	0	0	0	0	0	0
A	Other Streams	602	0	98	0	7	0	0	0	35	0	0	0
B	Harris River	64	0	10	0	0	0	0	0	4	0	0	0
B	Luck Lake	47	0	3	0	0	0	0	0	0	0	0	0
B	Staney Creek	153	0	2	0	0	0	0	0	0	0	0	0
B	Thorne System Stream and Lake	120	0	3	0	1	1	0	0	10	0	0	0
B	Other Lakes	27	0	4	0	0	0	0	0	0	0	0	0
B	Other Streams	212	0	67	27	0	0	0	0	0	0	0	0
C	Lakes and Streams	175	0	31	15	0	0	0	0	1	0	0	0
D	Plotnikof and Rezanof System Streams and Lakes	40	0	10	0	0	0	0	0	0	0	0	0
D	Eva Lake and Stream	107	0	5	0	0	0	0	0	8	0	0	0
D	Sitkoh Creek and Lake (Chichagof Island)	24	0	0	0	2	17	0	0	1	0	0	0
D	Unspecified Streams	45	0	0	0	24	0	0	0	74	0	0	0
D	Katlian River	297	0	11	0	0	0	0	0	2	0	0	0
D	Nakwasina Sound Streams	158	0	0	0	0	0	0	0	0	0	0	0
D	Baranof System	207	0	22	0	0	2	0	0	0	0	0	0
D	Other Lakes	95	0	0	0	0	0	0	0	11	0	0	0
D	Other Streams	490	1	4	4	11	0	0	0	48	0	0	0
E	Dupont to Echo Cove (Juneau Road System)	63	0	65	0	0	0	0	0	9	0	0	0
E	Admiralty Island Streams	529	0	59	1	2	0	0	0	349	0	0	0
E	Chaik Bay Streams	188	0	0	0	0	0	0	0	60	0	0	0
E	Other Lakes and Streams	1,429	0	68	0	31	0	0	0	874	0	0	0
G	Mud Bay Creek (Chichagof Island)	119	0	3	0	0	0	0	0	31	0	0	0
G	Trail River (Chichagof Island)	104	0	0	0	0	0	0	0	0	0	0	0
G	North Chichagof Island Streams	116	0	0	0	0	0	0	0	37	0	0	0
G	Other Lakes and Streams	72	0	2	1	0	0	0	0	14	0	0	0
H	Situk River (reach unspecified)	1,236	25	408	1,283	0	0	26	0	3	0	0	0
H	Akwe River	821	84	1,041	20	8	0	1	0	9	0	0	0
H	Tsiu River	1,507	9	3,340	3	0	0	0	0	2	0	0	0
H	Other Lakes and Streams	1,719	3	1,904	589	1	0	0	0	8	0	0	0
	Other Lakes and Streams in SE	560	0	18	137	1	1	0	0	10	0	0	0
	SC Total	11,671	122	7,178	2,080	91	21	27	0	1,600	0	0	0

Note: Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 08/07/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G18.–Freshwater logbook effort and species released by area and site, Southeast Alaska 2007.

Area	Description	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Lake trout	Dolly Varden	Grayling	Pike	Sheefish
			King	Coho	Sockeye								
A	Other Lakes	345	0	0	0	1,150	16	0	0	0	0	0	0
A	Other Streams	602	6	14	1	104	414	0	0	151	0	0	0
B	Harris River	64	0	4	0	5	0	3	0	12	0	0	0
B	Luck Lake	47	0	9	158	21	17	0	0	85	0	0	0
B	Staney Creek	153	0	23	12	21	9	18	0	112	0	0	0
B	Thorne System Stream and Lake	120	0	11	11	89	14	16	0	161	0	0	0
B	Other Lakes	27	0	4	0	34	1	2	0	56	0	0	0
B	Other Streams	212	0	29	69	285	71	3	0	345	0	0	0
C	Lakes and Streams	175	2	73	2	35	51	111	0	35	0	0	0
D	Plotnikof and Rezanof System Streams and Lakes	40	0	7	0	0	0	5	0	1	0	0	0
D	Eva Lake and Stream	107	0	4	1	77	3	1	0	283	0	0	0
D	Sitkoh Creek and Lake (Chichagof Island)	24	0	31	1	7	56	9	0	72	0	0	0
D	Unspecified Streams	45	0	9	1	0	33	11	0	251	0	0	0
D	Katlian River	297	0	1	0	0	1	0	0	2,161	0	0	0
D	Nakwasina Sound Streams	158	0	0	0	0	0	0	0	776	0	0	0
D	Baranof System	207	0	12	0	107	172	28	0	412	0	0	0
D	Other Lakes	95	0	0	4	295	6	0	0	135	0	0	0
D	Other Streams	490	8	19	46	42	75	21	0	3,792	0	0	0
E	Dupont to Echo Cove (Juneau Road System)	63	0	129	3	26	0	0	0	149	0	0	0
E	Admiralty Island Streams	529	0	217	6	30	4	0	0	1,190	0	0	0
E	Chaik Bay Streams	188	0	0	1	6	0	0	0	2,018	0	0	0
E	Other Lakes and Streams	1,429	0	21	0	25	0	3	0	5,429	0	0	0
G	Mud Bay Creek (Chichagof Island)	119	0	0	0	0	0	1	0	566	0	0	0
G	Trail River (Chichagof Island)	104	0	2	0	0	0	0	0	192	0	0	0
G	North Chichagof Island Streams	116	0	0	0	5	0	2	0	639	0	0	0
G	Other Lakes and Streams	72	0	11	0	1	0	0	0	275	0	0	0
H	Situk River (reach unspecified)	1,236	87	687	854	0	32	2,196	0	12	0	0	0
H	Akwe River	821	67	2,531	18	165	6	74	0	232	0	0	0
H	Tsiu River	1,507	0	6,470	6	0	3	3	0	5	0	0	0
H	Other Lakes and Streams	1,719	19	3,076	1,130	8	1	1	0	23	0	0	0
	Other Lakes and Streams in SE	560	0	1	211	0	0	0	0	317	0	0	0
	SE Total	11,671	189	13,395	2,535	2,538	985	2,508	0	19,887	0	0	0

Note: Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 08/07/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G19.–Freshwater logbook effort species kept by area and site, Southcentral Alaska, 2007.

Area	Description	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Lake trout	Dolly Varden	Grayling	Pike	Sheefish
			King	Coho	Sockeye								
J	Delight Lake	25	0	31	33	0	0	0	0	0	0	0	0
J	Other Lakes and Streams	416	2	493	94	2	0	0	0	0	0	0	0
K	Knik Arm Lakes and Streams	1,684	363	937	35	0	1	0	0	0	0	0	0
L	Anchorage Area Lakes and Streams	328	32	155	14	0	0	0	0	9	0	0	0
M	Willow Creek	200	1	14	0	0	0	0	0	0	0	0	0
M	Clear Creek (Chunilna Creek)	837	105	434	76	0	1	0	0	6	0	0	0
M	Sheep Creek	38	6	10	0	0	0	0	0	0	0	0	0
M	Little Willow Creek	101	5	108	0	0	0	0	0	0	0	0	0
M	Indian River (into Susitna)	106	39	27	2	0	0	0	0	0	0	0	0
M	Talkeetna River	1,606	306	454	241	0	0	0	0	9	0	0	0
M	Other Lakes - East Susitna Drainage	62	0	0	0	0	11	0	10	0	20	10	0
M	Other Streams - East Susitna Drainage	421	125	93	21	0	8	0	0	1	0	0	0
M	Lake Creek	3,902	744	1,210	765	0	47	0	0	4	0	2	0
M	Talachulitna River	1,430	494	479	137	0	14	0	0	16	7	1	0
M	Alexander Lake	23	0	0	0	0	0	0	0	0	0	3	0
M	Donkey Creek, Donkey Creek Slough	134	60	5	8	0	16	0	0	0	0	25	0
M	Fish Lake Creek and Fish Lakes	40	2	22	0	0	0	0	0	0	0	44	0
M	Yentna River Drainage (Remainder)	966	167	213	39	0	6	0	6	1	6	0	0
M	Yentna River	130	15	106	0	0	0	0	0	0	0	0	0
M	Deshka River (Kroto Creek) above weir	150	149	0	0	0	1	0	0	0	0	1	0
M	Deshka River (Kroto Creek) below weir	1,516	622	271	0	0	0	0	0	0	0	0	0
M	Indian Creek (into Yentna near Fish Lakes)	253	2	371	3	0	1	0	0	0	0	4	0
M	Other Lakes and Streams - West Susitna Drainage	237	19	73	0	0	2	0	0	0	0	17	0
M	Other Lakes and Streams	208	29	46	5	0	0	0	2	0	0	2	0
N	Chuitna River	548	179	256	0	0	0	0	0	0	0	0	0
N	Theodore River	96	5	50	0	0	1	0	0	5	0	0	0
N	Big River Lakes	3,627	6	4,613	4,673	18	1	0	0	29	0	0	2
N	Crescent Lake	149	0	92	81	0	0	0	13	124	0	0	0
N	Crescent River (Grecian River)	464	3	730	516	0	0	0	4	77	0	0	0
N	Kamishak River	354	9	536	0	0	0	0	0	122	0	0	0
N	Kustatan River	1,424	0	3,576	53	0	0	0	0	52	0	0	0
N	Bachatna Creek	74	3	196	0	0	0	0	0	0	0	0	0
N	Other Sites North Forelands to Susitna Drainage	93	8	54	6	0	14	0	0	27	6	3	0
N	Other Sites (South of North Forelands)	258	3	306	22	0	0	0	0	63	0	0	0
N	Wolverine Creek (by Big River Lakes)	3,594	12	1,360	7,346	0	0	30	0	0	0	0	0
P	Anchor River	173	1	16	0	0	0	0	0	42	0	0	0
P	Ninilchik River	475	93	100	2	0	0	0	0	3	0	0	0
P	Russian River	238	0	1	143	0	2	0	0	1	0	0	0
P	Swanson River Canoe Route Lakes	75	0	2	0	0	1	0	0	0	0	0	0
P	Crescent Creek	50	0	15	78	0	0	0	0	19	1	0	0

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Area	Description	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Lake trout	Dolly Varden	Grayling	Pike	Sheefish
			King	Coho	Sockeye								
P	Crescent Lake	26	0	0	0	0	6	0	0	0	3	0	0
P	Packers Lake (Creek) (Kalgin Island)	56	0	0	1	0	29	0	0	0	0	0	0
P	Quartz Creek	57	4	0	0	0	2	0	0	20	0	0	0
P	Russian Lake (Upper and Lower)	36	0	0	0	0	0	0	0	2	0	0	0
P	Kasilof River below Highway	6,761	2,553	793	279	0	2	10	0	136	0	0	0
P	Kasilof River above Highway	89	0	101	21	0	4	2	0	5	0	0	0
P	Kasilof River reach not specified	220	68	38	4	0	0	3	0	5	0	0	0
P	Other Lakes	109	0	0	0	0	11	0	4	0	1	0	0
P	Other Streams	655	1	195	1	0	51	1	0	13	0	0	0
P	Kenai River - Cook Inlet to Soldotna Bridge	30,139	6,613	5,610	1,281	3	146	0	1	125	1	0	0
P	Kenai River - Soldotna Bridge to Moose R	2,947	488	1,002	1,546	0	73	0	0	18	0	0	0
P	Kenai River - Moose River to Skilak Outlet	3,923	124	1,580	2,037	0	183	0	1	66	0	0	0
P	Kenai River - Skilak Inlet to Kenai Lake	6,303	10	88	2,145	0	193	0	0	61	0	0	0
P	Kenai River - reach not specified	1,840	163	293	433	0	48	0	0	23	4	0	0
Q	Buskin River	67	0	18	0	0	0	0	0	0	0	0	0
Q	Pasagshak River	115	0	18	31	0	0	0	0	13	0	0	0
Q	Roadside Streams	204	0	7	0	0	0	0	0	10	0	0	0
Q	Other Remote Lakes and Streams	1,008	1	480	123	0	5	2	0	172	0	0	0
Q	Roadside Lakes	148	0	32	1	0	0	0	0	18	0	0	0
Q	American River	29	0	4	0	0	0	0	0	4	0	0	0
Q	Dog Salmon Creek (Frazer River)	171	0	0	516	0	0	0	0	11	0	0	0
Q	Monashka Creek	12	0	0	0	0	0	0	0	1	0	0	0
Q	Olds River	55	0	17	0	0	0	0	0	3	0	0	0
Q	Ayakulik River (sometimes called Red River)	1,041	116	492	661	0	0	3	0	91	0	0	0
Q	Saltery River	844	0	247	78	0	0	0	0	650	1	0	0
Q	Afognak Island Lakes and Streams	40	0	104	0	0	1	1	0	0	0	0	0
Q	Zachar Bay Streams	197	0	236	0	0	0	0	0	40	0	0	0
Q	Karluk Lake and River above Weir	994	146	50	493	0	2	6	0	433	0	0	0
Q	Karluk Lagoon and River below Weir	870	48	454	1,639	0	1	4	0	60	0	0	0
Q	Unspecified Streams	47	0	0	0	0	0	0	0	4	0	0	0
R	Naknek River and Tributaries	1,896	575	892	836	0	44	0	0	30	6	4	0
R	Naknek Lake	393	0	0	79	0	1	0	6	0	0	3	0
R	Brooks River	856	5	0	15	0	22	0	0	0	0	0	0
R	Ugashik System	434	7	205	25	0	0	0	3	106	14	0	0
R	Becharof System	756	3	1,303	45	0	21	0	0	208	48	0	0
R	Brooks Lake	97	0	0	6	0	27	0	0	0	0	0	0
R	Chignik River	242	190	25	15	0	0	0	0	0	0	0	0
R	American Creek	1,184	0	0	22	0	123	0	0	119	0	0	0
R	Naknek R (Rapids Camp upstream to Naknek Lk)	1,425	80	806	1,491	0	8	0	0	4	1	0	0
R	Naknek River (dwnstream frm Rapids Camp)	660	241	193	270	0	0	0	0	0	0	0	0
R	Other Ak Peninsula / Aleutian Lakes and Streams	2,291	414	1,991	311	0	11	0	0	55	0	0	0

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Area	Description	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Lake trout	Dolly Varden	Grayling	Pike	Sheefish
			King	Coho	Sockeye								
R	Other Lakes and Streams	191	0	259	10	0	0	0	0	0	0	11	0
S	Kvichak River	1,928	4	260	1,446	0	141	0	0	3	24	3	0
S	Lower Talarik Creek	123	0	0	0	0	0	0	0	0	0	0	0
S	Copper River (Lake Iliamna Area)	1,221	0	2	344	0	81	0	0	0	1	0	0
S	Newhalen River	386	0	5	459	0	0	0	0	0	0	0	0
S	Alagnak (Branch) River	4,758	540	601	3,903	0	322	0	5	9	68	0	0
S	Lake Clark	345	0	43	0	0	0	0	21	1	1	0	0
S	Kukaklek Lake	29	0	0	0	0	0	0	0	0	0	0	0
S	Kulik River	1,055	0	0	0	0	0	0	0	0	0	0	0
S	Lake Iliamna	751	0	0	778	0	3	0	0	15	0	0	0
S	Nonvianuk Lake	111	0	0	3	0	161	0	22	0	0	0	0
S	Nonvianuk River (into Alagnak)	373	0	2	25	0	197	0	4	0	9	0	0
S	Tazimina River	163	0	1	0	0	1	0	0	0	1	0	0
S	Moraine Creek	1,615	0	0	6	0	120	0	0	0	9	0	0
S	Upper Talarik Creek	103	0	88	0	0	4	0	0	0	0	0	0
S	Battle River	381	0	0	0	0	0	0	0	0	0	0	0
S	Funnel Creek	51	0	0	0	0	0	0	0	0	0	0	0
S	Nanuktuk Creek	203	0	0	0	0	30	0	0	3	0	0	0
S	Long Lake	127	0	0	0	0	0	0	0	0	0	2	0
S	Kijik Lake	17	0	0	0	0	0	0	0	1	1	0	0
S	Gibraltar River	338	0	4	177	0	15	0	0	1	0	0	0
S	Kukaklek River (Big Ku) (into Alagnak)	815	0	0	65	0	57	0	0	6	0	0	0
S	Little Kulik (into Nanuktuk Creek)	83	0	0	0	0	5	0	0	0	0	0	0
S	Other Lakes	24	0	0	28	0	0	0	0	0	0	0	0
S	Other Streams	105	0	8	52	0	0	0	0	0	0	0	0
T	Nushagak River System	489	73	2	4	0	1	0	2	24	0	0	0
T	Wood River Lakes System	733	1	114	112	0	38	0	0	301	45	31	0
T	Tikchik-Nuyakuk Lake System	293	3	0	0	0	0	0	30	10	24	1	0
T	Togiak River System	2,211	1,076	1,381	173	0	36	0	0	236	0	0	0
T	Mulchatna River	386	12	21	143	0	13	0	0	5	178	13	0
T	Agulowak River	957	0	1	973	0	161	0	0	30	20	0	0
T	Aleknagik Lake	293	0	150	82	0	0	0	0	12	0	0	0
T	Agulukpak River	685	0	0	16	0	44	0	0	28	3	0	0
T	Nushagak R - upstream of Mulchatna River	715	6	143	2	0	207	0	0	121	88	0	0
T	Wood River	100	0	191	99	0	5	0	0	0	2	0	0
T	Nushagak River - Black Point to Sonar Site	3,882	2,074	708	9	0	6	0	0	23	16	12	0
T	Nushagak River - Sonar Site to Mulchatna	3,750	2,093	288	8	0	0	0	0	3	6	4	0
T	Other Lakes and Streams	840	29	423	20	0	36	0	0	0	29	0	0
	Other Lakes and Streams in SC	15	3	0	10	0	0	0	0	0	0	0	0
	SC Total	126,387	21,373	39,424	37,745	23	2,825	62	134	3,948	644	196	2

Note: Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 08/07/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G20.–Freshwater logbook effort and species released by area and site, Southcentral Alaska, 2007.

Area	Description	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Lake trout	Dolly Varden	Grayling	Pike	Sheefish
			King	Coho	Sockeye								
J	Delight Lake	25	0	7	43	0	0	0	0	0	0	0	0
J	Other Lakes and Streams	416	2	1,527	132	4	0	1	0	159	0	0	0
K	Lakes and Streams	1,684	51	70	64	0	9	0	0	17	0	0	0
L	Lakes and Streams	328	51	8	3	0	82	0	0	402	29	0	0
M	Willow Creek	200	3	8	0	0	1,537	0	0	2	75	6	0
M	Clear Creek (Chunilna Creek)	837	216	295	61	5	230	0	0	178	30	0	0
M	Sheep Creek	38	0	1	0	0	99	0	0	0	17	0	0
M	Little Willow Creek	101	6	34	29	0	4	0	0	0	0	0	0
M	Indian River (into Susitna)	106	112	1	0	0	19	0	0	0	3	5	0
M	Talkeetna River	1,606	381	417	190	2	143	0	6	511	28	0	0
M	Other Lakes - East Susitna Drainage	62	1	0	0	0	97	0	14	5	201	45	0
M	Other Streams - East Susitna Drainage	421	48	27	35	0	331	13	0	4	98	1	0
M	Lake Creek	3,902	775	344	934	4	4,025	44	14	4	122	109	10
M	Talachulitna River	1,430	1,198	1,498	238	0	1,778	0	0	56	406	93	0
M	Alexander Lake	23	0	0	0	0	0	0	0	0	0	363	0
M	Donkey Creek, Donkey Creek Slough	134	34	12	0	0	121	0	6	10	7	0	0
M	Fish Lake Creek and Fish Lakes	40	0	24	2	0	0	0	0	0	4	190	0
M	Yentna River Drainage (Remainder)	966	518	323	86	0	2,233	0	20	461	124	0	0
M	Yentna River	130	12	108	0	0	0	0	0	0	0	0	0
M	Deshka River (Kroto Creek) above weir	150	97	0	0	0	432	0	0	0	1	59	0
M	Deshka River (Kroto Creek) below weir	1,516	69	125	0	0	58	0	0	17	14	0	0
M	Indian Creek (into Yentna near Fish Lakes)	253	1	93	1	0	40	0	0	0	0	4	0
M	Other Lakes and Streams - West Susitna Drainage	237	104	137	0	0	63	0	0	1	61	0	0
M	Other Lakes and Streams	208	166	133	49	0	805	0	5	402	142	1	0
N	Chuitna River	548	449	552	0	0	77	0	0	8	0	0	0
N	Theodore River	96	44	183	0	0	21	0	0	28	0	0	0
N	Big River Lakes	3,627	0	1,330	8,320	34	10	0	1	116	0	0	8
N	Crescent Lake	149	3	3	325	0	0	0	84	1,288	37	0	0
N	Crescent River (Grecian River)	464	5	101	303	0	0	0	67	1,485	2	0	0
N	Kamishak River	354	22	724	5	17	0	0	0	2,625	0	0	0
N	Kustatan River	1,424	0	1,049	35	1	1	0	0	322	0	0	0
N	Bachatna Creek	74	0	195	0	0	0	0	0	3	0	0	0
N	Other Sites North Forelands to Susitna Drainage	93	3	60	3	0	67	0	0	313	5	87	0
N	Other Sites (South of North Forelands)	258	1	219	11	0	5	0	18	271	40	0	0
N	Wolverine Creek (by Big River Lakes)	3,594	31	311	8,754	0	1	30	61	7	0	0	0
P	Anchor River	173	12	20	0	0	2	10	0	544	0	0	0
P	Ninilchik River	475	685	29	0	0	3	33	0	10	0	0	0
P	Russian River	238	1	1	77	0	742	8	0	30	0	0	0
P	Swanson River Canoe Route Lakes	75	0	1	0	0	104	0	0	3	0	0	0
P	Crescent Creek	50	0	0	4	0	5	0	0	133	4	0	0

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Area	Description	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Lake trout	Dolly Varden	Grayling	Pike	Sheefish
			King	Coho	Sockeye								
P	Crescent Lake	26	0	0	0	0	24	0	0	0	118	0	0
P	Packers Lake (Creek) (Kalgin Island)	56	0	0	0	0	496	0	0	1	0	0	0
P	Quartz Creek	57	0	0	33	0	35	0	0	741	0	0	0
P	Russian Lake (Upper and Lower)	36	0	0	10	0	37	0	0	43	0	0	0
P	Kasilof River below Highway	6,761	1,481	25	27	2	609	243	1	1,174	0	0	1
P	Kasilof River above Highway	89	59	6	7	0	16	6	0	151	0	0	0
P	Kasilof River reach not specified	220	26	0	0	0	2	5	0	18	0	0	0
P	Other Lakes	109	0	0	0	0	608	0	3	0	56	0	0
P	Other Streams	655	26	522	45	0	799	89	0	1,483	14	0	0
P	Kenai River - Cook Inlet to Soldotna Bridge	30,139	4,493	228	190	2	2,930	1	3	1,539	0	0	1
P	Kenai River - Soldotna Bridge to Moose R	2,947	481	198	857	4	5,359	5	1	1,097	0	0	1
P	Kenai River - Moose River to Skilak Outlet	3,923	119	489	1,049	0	21,530	7	13	10,134	5	0	2
P	Kenai River - Skilak Inlet to Kenai Lake	6,303	8	38	2,060	5	26,352	26	15	28,942	0	0	1
P	Kenai River - reach not specified	1,840	123	19	220	3	3,910	13	0	2,341	41	0	0
Q	Buskin River	67	0	50	0	0	0	2	0	54	0	0	0
Q	Pasagshak River	115	0	70	24	0	0	0	0	39	0	0	0
Q	Roadside Streams	204	0	27	1	0	0	0	0	494	0	0	0
Q	Other Remote Lakes and Streams	1,008	0	868	161	0	508	120	0	7,167	0	0	0
Q	Roadside Lakes	148	0	222	5	0	2	1	0	148	0	0	0
Q	American River	29	0	0	0	0	0	0	0	46	0	0	0
Q	Dog Salmon Creek (Frazer River)	171	0	16	178	0	36	46	0	38	0	0	0
Q	Monashka Creek	12	0	1	0	0	0	0	0	1	0	0	0
Q	Olds River	55	0	6	0	0	0	0	0	67	0	0	0
Q	Ayakulik River (sometimes called Red River)	1,041	1,737	1,793	1,811	0	26	828	0	1,838	0	0	0
Q	Saltery River	844	0	332	36	0	118	48	0	5,281	0	0	0
Q	Afognak Island Lakes and Streams	40	0	30	0	0	4	0	0	40	0	0	0
Q	Zachar Bay Streams	197	0	294	0	0	0	1	0	142	0	0	0
Q	Karluk Lake and River above Weir	994	380	145	1,555	0	49	318	0	3,277	0	0	0
Q	Karluk Lagoon and River below Weir	870	30	176	726	0	2	3	0	232	0	0	0
Q	Unspecified Streams	47	0	12	1	0	3	1	0	410	0	0	0
R	Naknek River and Tributaries	1,896	549	344	884	0	3,322	0	330	2,216	608	30	0
R	Naknek Lake	393	0	0	74	0	1,907	0	1,155	1,627	35	147	0
R	Brooks River	856	5	1	1,543	0	4,671	0	47	4	33	0	0
R	Ugashik System	434	175	662	53	0	0	0	13	2,130	312	0	0
R	Becharof System	756	16	1,539	221	0	493	0	21	4,610	770	16	0
R	Brooks Lake	97	0	1	77	0	844	0	76	46	2	0	0
R	Chignik River	242	346	12	22	0	7	0	0	370	0	0	0
R	American Creek	1,184	0	0	625	0	5,811	0	4	11,691	0	0	0
R	Naknek R (Rapids Camp upstream to Naknek Lk)	1,425	145	193	1,662	0	2,870	0	0	906	83	37	2
R	Naknek River (dwnstream frm Rapids Camp)	660	148	37	208	0	155	0	0	8	1	0	0
R	Other Ak Peninsula / Aleutian Lakes and Streams	2,291	1,769	3,144	643	0	904	429	0	5,245	0	0	12

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Area	Description	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Lake trout	Dolly Varden	Grayling	Pike	Sheefish
			King	Coho	Sockeye								
R	Other Lakes and Streams	191	22	773	45	0	93	3	0	501	0	7	0
S	Kvichak River	1,928	14	979	2,510	0	17,698	0	1	159	3,821	10	0
S	Lower Talarik Creek	123	0	29	2	0	1,699	0	0	0	43	0	0
S	Copper River (Lake Iliamna Area)	1,221	0	3	1,453	0	13,548	0	0	96	55	26	0
S	Newhalen River	386	0	5	329	0	1,004	0	255	226	630	176	0
S	Alagnak (Branch) River	4,758	2,867	1,872	6,963	0	18,107	0	33	693	4,671	73	15
S	Lake Clark	345	0	12	2	0	83	0	306	141	2,147	32	0
S	Kukaklek Lake	29	0	0	30	0	534	0	0	5	3	0	0
S	Kulik River	1,055	0	0	15	0	19,455	0	193	9	9	0	0
S	Lake Iliamna	751	0	0	1,156	0	2,422	0	0	1,996	4	25	0
S	Nonvianuk Lake	111	0	0	0	0	1,108	0	34	0	0	0	0
S	Nonvianuk River (into Alagnak)	373	31	18	124	0	3,681	0	64	2	20	0	0
S	Tazimina River	163	0	0	12	0	449	0	23	27	1,036	30	0
S	Moraine Creek	1,615	0	0	768	0	19,781	0	23	98	484	2	0
S	Upper Talarik Creek	103	0	73	32	0	548	0	0	0	0	0	0
S	Battle River	381	0	0	653	0	2,651	0	10	24	117	0	0
S	Funnel Creek	51	0	0	3	0	508	0	0	18	1	0	0
S	Nanuktuk Creek	203	0	0	13	0	2,781	0	0	234	20	0	0
S	Long Lake	127	0	0	0	0	0	0	0	0	0	1,970	0
S	Kijik Lake	17	0	0	0	0	0	0	25	36	102	0	0
S	Gibraltar River	338	0	2	637	0	4,705	0	0	80	50	0	0
S	Kukaklek River (Big Ku) (into Alagnak)	815	1	0	224	0	11,192	0	15	126	137	2	0
S	Little Kulik (into Nanuktuk Creek)	83	0	0	22	0	1,073	0	1	86	12	1	0
S	Other Lakes	24	0	0	22	0	52	0	20	44	0	32	0
S	Other Streams	105	0	54	111	0	809	0	0	198	25	12	0
T	Nushagak River System	489	335	58	106	0	1,735	0	53	1,168	3,541	42	0
T	Wood River Lakes System	733	340	156	775	0	1,116	0	0	1,051	1,440	962	0
T	Tikchik-Nuyakuk Lake System	293	39	5	12	0	172	0	672	144	926	286	0
T	Togiak River System	2,211	7,248	2,990	336	0	880	0	0	5,484	117	111	0
T	Mulchatna River	386	337	516	444	0	1,684	0	25	754	1,719	165	0
T	Agulowak River	957	0	7	1,250	0	8,811	0	0	1,221	1,488	79	0
T	Aleknagik Lake	293	0	45	174	0	0	0	0	926	13	280	0
T	Agulukpak River	685	0	0	336	0	3,386	0	0	697	974	185	0
T	Nushagak R - upstream of Mulchatna River	715	85	316	27	0	3,546	0	0	2,363	2,246	23	0
T	Wood River	100	3	176	108	0	64	0	0	44	6	7	0
T	Nushagak River - Black Point to Sonar Site	3,882	12,209	2,270	10	0	395	0	0	236	395	86	0
T	Nushagak River - Sonar Site to Mulchatna	3,750	8,717	697	1	0	50	0	0	36	22	95	0
T	Other Lakes and Streams	840	999	2,206	242	0	1,153	0	25	144	631	6	0
	Other Lakes and Streams in SC	15	1	0	7	0	39	0	0	16	24	0	0
	SC Total	126,387	50,465	34,732	53,666	83	244,595	2,334	3,756	124,289	30,457	5,918	53

Note: Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 08/07/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G21.–Freshwater logbook effort species kept by area and site, AYK Alaska, 2007.

Area	Description	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Lake trout	Dolly Varden	Grayling	Pike	Sheefish
			King	Coho	Sockeye								
I	Gulkana River (Highway to Copper River)	68	35	0	0	0	0	0	0	0	0	0	0
I	Klutina River	1,657	904	0	967	0	2	0	2	161	39	0	0
I	Gulkana River (West Fork to Highway)	1,045	671	0	64	0	0	0	0	0	7	0	0
I	Other Lakes and Streams	141	48	0	0	0	0	0	10	0	0	0	0
U	Other Lakes	1,239	3	233	7	0	101	0	0	2	0	16	0
U	Other Streams	316	14	41	0	0	0	0	0	0	78	7	0
V	Kanektok River (Quinhagak, Chosen)	2,722	301	796	210	0	94	0	0	130	8	0	0
V	Goodnews River	1,139	81	371	122	0	6	0	0	58	0	0	0
V	Aniak River	665	14	132	3	0	28	0	0	37	14	2	0
V	Holitna River	440	61	39	13	0	0	0	0	5	3	8	10
V	Streams - Kuskokwim Drainages above Aniak	36	0	18	0	0	0	0	0	0	0	0	0
V	Lakes - Kuskokwim Drainages above Aniak	9	0	0	0	0	0	0	0	0	0	0	0
V	Kuskokwim Drainage below Aniak	351	0	51	14	0	0	0	0	6	1	0	0
V	Lakes and Streams - Kuskokwim Bay	213	0	9	3	0	0	0	0	0	1	0	0
W	Streams of Seward Peninsula/Norton Sound	885	43	918	0	0	0	0	0	77	18	9	0
Y	Streams of the Yukon River Drainage	1,273	143	164	2	0	0	0	0	28	215	223	6
	Other Lakes and Streams in AYK	63	0	0	0	0	0	0	0	0	30	0	1
	AYK Total	12,262	2,318	2,772	1,405	0	231	0	12	504	414	265	17

Note: Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 08/07/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G22.–Freshwater logbook effort species released by area and site, AYK Alaska, 2007.

Area	Description	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Lake trout	Dolly Varden	Grayling	Pike	Sheefish
			King	Coho	Sockeye								
I	Gulkana River (Highway to Copper River)	68	39	0	0	0	0	0	0	0	135	0	0
I	Klutina River	1,657	549	0	453	0	7	0	0	26	13	0	0
I	Gulkana River (West Fork to Highway)	1,045	528	0	101	0	15	0	23	0	58	0	0
I	Other Lakes and Streams	141	89	0	0	0	15	2	91	0	246	0	0
U	Other Lakes	1,239	0	20	1	0	961	1	0	0	341	88	0
U	Other Streams	316	29	149	0	0	0	0	0	0	2,826	72	0
V	Kanektok River (Quinhagak, Chosen)	2,722	1,627	4,375	1,300	0	9,579	0	5	14,551	1,818	13	0
V	Goodnews River	1,139	537	2,138	88	0	1,323	0	4	3,747	236	0	0
V	Aniak River	665	1,600	1,908	81	0	3,132	0	0	3,821	1,160	523	68
V	Holitna River	440	550	317	45	0	5	0	0	931	666	1,806	165
V	Streams - Kuskokwim Drainages above Aniak	36	27	61	12	0	53	0	0	43	66	35	0
V	Lakes - Kuskokwim Drainages above Aniak	9	0	0	0	0	0	0	52	0	67	12	0
V	Kuskokwim Drainage below Aniak	351	316	719	69	0	2,939	0	0	2,918	1,328	28	1
V	Lakes and Streams - Kuskokwim Bay	213	32	494	18	0	949	0	79	642	102	1	0
W	Streams of Seward Peninsula/Norton Sount	885	700	7,258	0	0	0	0	0	1,625	2,609	18	0
Y	Streams of the Yukon River Drainage	1,273	566	2,218	18	0	0	0	0	660	8,826	9,267	84
	Other Lakes and Streams in AYK	63	0	0	0	0	0	0	0	129	345	0	484
	AYK Total	12,262	7,189	19,657	2,186	0	18,978	3	254	29,093	20,842	11,863	802

Note: Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 08/07/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G23.–Freshwater logbook effort and species kept by region, Statewide, 2007.

Region	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Lake trout	Dolly Varden	Grayling	Pike	Sheefish
		King	Coho	Sockeye								
SE	11,671	122	7,178	2,080	91	21	27	0	1,600	0	0	0
SC	126,387	21,373	39,424	37,745	23	2,825	62	134	3,948	644	196	2
AYK	12,262	2,318	2,772	1,405	0	231	0	12	504	414	265	17
Total	150,320	23,813	49,374	41,230	114	3,077	89	146	6,052	1,058	461	19

Note: Data are current as of 08/07/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G24.–Freshwater logbook effort and species released by region, Statewide, 2007.

Region	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Lake trout	Dolly Varden	Grayling	Pike	Sheefish
		King	Coho	Sockeye								
SE	11,671	189	13,395	2,535	2,538	985	2,508	0	19,887	0	0	0
SC	126,387	50,465	34,732	53,666	83	244,595	2,334	3,756	124,289	30,457	5,918	53
AYK	12,262	7,189	19,657	2,186	0	18,978	3	254	29,093	20,842	11,863	802
Total	150,320	57,843	67,784	58,387	2,621	264,558	4,845	4,010	173,269	51,299	17,781	855

Note: Data are current as of 08/07/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G25.–Freshwater logbook participation by site code and area, Southeast Alaska, 2008.

Area	Description	Trips	Businesses[a]	Angler Days						
				Guides[a]	Resident	Nonres	Comped	Unknown	Crew	Total
A	Lakes and Streams	173	6	19	4	548	0	15	1	568
B	Eagle Creek (Bear Creek)	20	7	8	3	49	0	0	0	52
B	Harris River	20	6	8	0	52	0	0	1	53
B	Luck Lake	9	4	4	2	25	1	0	0	28
B	Staney Creek	42	9	11	2	105	0	0	2	109
B	Thorne System Stream and Lake	59	11	15	3	172	0	1	0	176
B	Sweetwater System Stream and Lake	13	4	4	0	40	0	0	0	40
B	Other Lakes and Streams	97	9	12	2	259	0	0	2	263
C	Lakes and Streams	57	10	11	11	160	0	0	1	172
D	Plotnikof and Rezanof System Streams and Lakes	25	6	9	2	77	0	0	0	79
D	Eva Lake and Stream	16	4	7	1	62	0	0	4	67
D	Sitkoh Creek and Lake (Chichagof Island)	17	5	8	0	55	0	0	0	55
D	Katlian River	78	5	8	0	237	2	1	0	240
D	Nakwasina Sound Streams	49	6	10	2	150	0	0	0	152
D	Saook Bay Streams	48	4	16	2	214	0	0	20	236
D	Fish Bay Streams	5	4	5	0	24	0	0	0	24
D	Other Lakes	36	6	7	4	93	0	0	3	100
D	Other Streams	187	14	37	16	616	0	0	6	638
E	Dupont to Echo Cove (Juneau Road System)	7	4	4	10	19	0	0	0	29
E	Admiralty Island Streams	196	6	23	5	801	1	0	7	814
E	Chaik Bay Streams	52	4	12	1	206	0	0	4	211
E	Other Lakes and Streams	379	7	27	6	1,470	0	10	4	1,490
G	Mud Bay Creek (Chichagof Island)	26	5	8	1	98	0	0	4	103
G	Trail River (Chichagof Island)	21	6	8	2	89	0	0	13	104
G	Chicken Creek (Chichagof Island)	43	4	14	1	174	0	0	1	176
G	North Chichagof Island Streams	9	4	6	2	31	0	0	1	34
G	Other Lakes and Streams	16	4	5	5	57	0	0	4	66
H	Akwe River	121	4	5	71	380	0	0	70	521
H	Situk River (above weir)	501	7	16	100	1,047	1	1	17	1,166
H	Situk River (below weir)	56	4	11	1	113	0	1	1	116
H	Other Lakes and Streams	613	14	34	61	2,194	14	3	30	2,302
	Other Lakes and Streams in SE	122	2	7	0	526	0	19	1	546
SE Total		3,113	70	178	320	10,143	19	51	197	10,730

Note: Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 08/12/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G26.–Freshwater logbook participation by site code and area, Southcentral Alaska, 2008.

Area	Description	Trips	Businesses[a]	Guides[a]	Angler Days					
					Resident	Nonres	Comped	Unknown	Crew	Total
J	Other Lakes	5	4	4	2	18	0	0	0	20
J	Other Streams	89	7	11	34	363	0	4	4	405
K	Knik Arm Lakes and Streams	492	14	22	583	1,234	15	11	46	1,889
M	Willow Creek	44	7	13	55	42	0	2	0	99
M	Clear Creek (Chunilna Creek)	64	9	11	18	237	3	6	1	265
M	Little Willow Creek	50	5	10	83	71	0	1	4	159
M	Indian River (into Susitna)	13	4	5	1	41	0	0	0	42
M	Talkeetna River	512	10	33	255	1,785	1	131	20	2,192
M	Other Lakes - East Susitna Drainage	11	4	4	6	27	0	0	0	33
M	Other Streams - East Susitna Drainage	118	10	13	76	306	3	1	3	389
M	Deshka River (Kroto Creek)	33	4	6	14	98	0	0	0	112
M	Lake Creek	1,195	26	64	290	3,073	10	1	41	3,415
M	Talachulitna River	913	13	44	145	2,418	5	1	23	2,592
M	Alexander Lake	16	5	7	1	44	0	0	0	45
M	Chelatna Lake	46	4	6	0	112	0	1	1	114
M	Eightmile Creek	42	4	7	16	95	0	0	4	115
M	Fish Lake Creek and Fish Lakes	152	11	24	62	337	0	0	9	408
M	Moose Creek (into Yentna)	26	4	8	7	51	0	0	1	59
M	Skwentna River	82	6	12	21	160	1	0	0	182
M	Susitna River	19	4	6	31	38	0	0	0	69
M	Yentna River Drainage (Remainder)	383	16	49	45	1,188	1	1	14	1,249
M	Yentna River	242	8	27	68	559	0	0	7	634
M	Deshka River (Kroto Creek) below weir	211	12	18	251	505	1	8	11	776
M	Indian Creek (into Yentna near Fish Lakes)	106	5	13	38	323	0	0	18	379
M	Other Lakes and Streams - West Susitna Drainage	87	13	21	60	208	1	0	13	282
M	Streams and Lakes	10	5	5	7	26	0	1	0	34
N	Chuitna River	54	11	15	6	215	0	0	0	221
N	Big River Lakes	1,351	32	51	189	5,127	1	10	2	5,329
N	Big River	5	4	4	0	14	0	0	2	16
N	Crescent Lake	56	16	21	7	234	0	3	1	245
N	Crescent River (Grecian River)	103	8	13	8	298	0	5	0	311
N	Kamishak River	73	7	21	0	248	1	0	6	255
N	Kustatan River	309	28	42	90	1,280	2	3	3	1,378
N	Silver Salmon Creek	42	4	5	0	141	0	1	0	142
N	Bachatna Creek	15	5	5	0	54	0	0	0	54
N	Other Sites North Forelands to Susitna Drainage	44	9	18	0	156	1	1	4	162
N	Other Sites (South of North Forelands)	63	13	21	1	240	0	0	0	241
N	Wolverine Creek (by Big River Lakes)	585	21	36	89	2,217	2	9	1	2,318
P	Anchor River	51	7	9	1	192	0	1	5	199
P	Ninilchik River	55	4	7	6	247	2	0	2	257
P	Deep Creek	43	5	7	2	160	1	0	15	178

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Area	Description	Trips	Businesses[a]	Guides[a]	Angler Days					
					Resident	Nonres	Comped	Unknown	Crew	Total
P	Russian River	137	15	22	20	276	0	3	0	299
P	Swanson River Canoe Route Lakes	16	4	4	19	27	0	0	12	58
P	Crescent Lake	44	4	9	0	125	0	0	0	125
P	Quartz Creek	31	6	8	0	51	0	2	0	53
P	Kasilof River below Highway	1,980	88	139	858	5,627	19	58	98	6,660
P	Kasilof River above Highway	28	10	11	8	75	1	1	4	89
P	Kasilof River reach not specified	97	19	21	47	268	0	1	0	316
P	Stocked Lakes	13	5	5	1	37	0	0	1	39
P	Other Lakes	47	15	18	18	148	0	0	11	177
P	Other Streams	105	11	17	36	367	1	4	0	408
P	Kenai River - Cook Inlet to Soldotna Bridge	8,560	211	321	4,243	25,574	120	236	61	30,234
P	Kenai River - Soldotna Bridge to Moose R	803	65	94	222	2,368	2	9	86	2,687
P	Kenai River - Moose River to Skilak Outlet	1,104	80	108	469	2,933	16	20	12	3,450
P	Kenai River - Skilak Inlet to Kenai Lake	2,381	40	94	874	6,548	13	54	83	7,572
P	Kenai River - reach not specified	175	31	37	62	479	4	11	1	557
Q	Buskin River	19	4	4	6	49	0	0	2	57
Q	Pasagshak River	38	7	7	24	88	0	0	3	115
Q	Roadside Streams	35	11	11	1	97	0	0	6	104
Q	Other Remote Lakes and Streams	296	20	32	49	940	4	0	5	998
Q	Roadside Lakes	45	6	8	9	155	3	0	2	169
Q	American River	16	6	6	1	37	0	0	1	39
Q	Buskin Lake	7	4	4	0	20	0	0	2	22
Q	Dog Salmon Creek (Frazer River)	98	6	16	11	327	0	0	5	343
Q	Olds River	21	7	7	6	63	0	0	0	69
Q	Ayakulik River (sometimes called Red River)	207	4	10	23	680	3	2	3	711
Q	Saltery River	349	11	17	97	1,056	4	4	10	1,171
Q	Uganik River	96	4	6	8	341	2	2	39	392
Q	Browns Lagoon River	15	5	6	0	54	0	0	1	55
Q	Zachar Bay Streams	33	4	8	1	96	0	0	5	102
Q	Karluk Lake and River above Weir	109	6	12	13	552	0	10	0	575
Q	Karluk Lagoon and River below Weir	100	5	14	3	588	1	8	0	600
R	Naknek River and Tributaries	684	22	66	165	1,590	11	6	109	1,881
R	Naknek Lake	66	5	10	10	215	3	0	5	233
R	Brooks River	317	20	73	34	783	7	4	5	833
R	Ugashik System	113	14	34	7	324	0	0	8	339
R	Becharof System	234	19	47	12	671	2	1	12	698
R	American Creek	595	19	71	60	1,512	1	0	1	1,574
R	Naknek River (Rapids Camp upstream to Naknek Lk)	639	18	49	43	1,562	3	6	92	1,706
R	Naknek River (dwnstream frm Rapids Camp)	276	14	33	39	604	0	1	42	686
R	Other Alaska Peninsula / Aleutian Streams	1,014	18	57	75	2,620	0	3	44	2,742
R	Other Alaska Peninsula / Aleutian Lakes	34	7	10	5	95	0	0	1	101
R	Other Streams	76	17	31	0	263	0	0	4	267

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Area	Description	Trips	Businesses[a]	Guides[a]	Angler Days					
					Resident	Nonres	Comped	Unknown	Crew	Total
S	Kvichak River	979	22	94	63	2,146	1	4	4	2,218
S	Lower Talarik Creek	51	6	20	2	140	0	1	0	143
S	Copper River (Lake Iliamna Area)	525	8	32	21	1,366	2	0	1	1,390
S	Gibraltar Lake	21	4	11	1	67	0	0	1	69
S	Newhalen River	111	9	28	21	418	0	0	2	441
S	Alagnak (Branch) River	1,813	22	106	26	4,083	4	6	54	4,173
S	Lake Clark	109	9	27	17	313	0	0	0	330
S	Kulik River	532	19	57	57	1,390	1	0	0	1,448
S	Lake Iliamna	229	13	34	5	668	1	0	1	675
S	Nonvianuk Lake	18	7	9	0	64	0	0	15	79
S	Nonvianuk River (into Alagnak)	142	17	45	18	363	0	0	18	399
S	Pike Lakes	8	4	6	0	17	0	0	0	17
S	Tazimina River	54	5	20	5	136	0	0	0	141
S	Moraine Creek	468	23	93	6	1,206	0	0	25	1,237
S	Upper Talarik Creek	29	4	14	0	111	0	0	0	111
S	Battle River	114	11	26	2	309	2	4	47	364
S	Funnel Creek	43	6	11	0	103	0	0	0	103
S	Nanuktuk Creek	126	9	36	3	299	0	0	0	302
S	Kijik River	19	5	10	0	64	0	0	0	64
S	Kijik Lake	10	4	6	1	39	0	0	0	40
S	Gibraltar River	96	8	24	2	262	0	0	1	265
S	Kukaklek River (Big Ku) (into Alagnak)	254	11	51	47	502	0	0	0	549
S	Battle Lake	6	4	4	3	9	0	0	0	12
S	Little Kulik (into Nanuktuk Creek)	61	8	18	2	139	0	0	0	141
S	Other Lakes and Streams	27	5	11	1	61	0	0	0	62
T	Nushagak River System	407	26	52	21	888	1	0	3	913
T	Wood River Lakes System	335	12	51	18	733	0	13	4	768
T	Tikchik-Nuyakuk Lake System	159	5	25	12	334	3	2	4	355
T	Togiak River System	841	8	62	36	1,758	3	19	2	1,818
T	Mulchatna River	118	17	24	11	397	0	13	0	421
T	Agulowak River	553	9	44	92	952	0	29	0	1,073
T	Aleknagik Lake	69	5	16	1	142	0	5	0	148
T	Agulukpak River	256	8	36	2	475	0	3	0	480
T	Nushagak River - upstream of Mulchatna River	172	9	20	3	324	0	0	3	330
T	Nushagak River - Black Point to Sonar Site	1,023	31	115	135	2,924	2	67	50	3,178
T	Nushagak River - Sonar Site to Mulchatna	1,420	31	123	236	4,256	5	29	34	4,560
T	Other Lakes	21	5	10	1	56	0	0	0	57
T	Other Streams	372	7	34	5	782	1	0	0	788
	Other Lakes and Streams in SC	133	8	8	36	326	2	0	0	364
SC Total		40,587	512	1,305	11,059	113,089	299	843	1,306	126,596

Note: Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 08/12/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G27.–Freshwater logbook participation by site code and area, AYK Alaska, 2008.

Area	Description	Trips	Businesses[a]	Guides[a]	Angler Days					
					Resident	Nonres	Comped	Unknown	Crew	Total
I	Klutina River	470	11	22	331	1,200	4	10	26	1,571
I	Gulkana River (reach unspecified)	75	5	8	58	165	0	0	16	239
I	Gulkana River (West Fork to Highway)	205	14	25	156	588	0	2	8	754
I	Other Lakes and Streams	11	4	5	9	19	0	0	0	28
U	Other Lakes	227	5	15	18	911	1	3	13	946
U	Other Streams	72	6	15	68	128	0	5	9	210
V	Kanektok River (Quinhagak, Chosen)	1,390	5	56	37	2,775	0	0	0	2,812
V	Goodnews River	583	6	20	18	1,041	0	0	0	1,059
V	Aniak River	380	7	19	17	814	0	0	0	831
V	Holitna River	223	7	21	7	525	1	0	3	536
V	Lakes and Streams - Kuskokwim Bay	97	5	14	0	198	0	0	5	203
V	Other Lakes and Streams - Kuskokwim Drainage	155	12	22	53	589	1	0	19	662
W	Streams of Seward Peninsula/Norton Sound	418	6	18	33	875	0	1	11	920
Y	Streams of the Yukon River Drainage	484	7	22	45	941	0	5	1	992
	Other Lakes and Streams in AYK	11	3	3	10	59	0	0	1	70
AYK Total		4,801	69	222	860	10,828	7	26	112	11,833

Note: Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 08/12/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G28.–Freshwater logbook participation by region, 2008.

Region	Trips	Businesses[a]	Guides[a]	Angler Days					
				Resident	Nonres	Comped	Unknown	Crew	Total
SE	3,113	70	178	320	10,143	19	51	197	10,730
SC	40,587	512	1,305	11,059	113,089	299	843	1,306	126,596
AYK	4,801	69	222	860	10,828	7	26	112	11,833
Total	48,501	630	1,636	12,239	134,060	325	920	1,615	149,159

Note: Data are current as of 08/12/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G29.–Freshwater logbook effort species kept by area and site, Southeast Alaska 2008.

Area	Description	Angler Days	Salmon										
			King	Coho	Sockeye	Cutthroat	Rainbow	Steelhead	Lake trout	Dolly Varden	Grayling	Pike	Sheefish
A	Lakes and Streams	568	0	83	0	0	0	0	0	4	0	0	0
B	Eagle Creek (Bear Creek)	52	0	0	0	0	0	0	0	0	0	0	0
B	Harris River	53	0	3	0	0	0	0	0	0	0	0	0
B	Luck Lake	28	0	0	0	0	0	0	0	7	0	0	0
B	Staney Creek	109	0	11	0	0	0	0	0	0	0	0	0
B	Thorne System Stream and Lake	176	0	56	0	1	0	0	0	42	0	0	0
B	Sweetwater System Stream and Lake	40	0	45	26	1	0	0	0	2	0	0	0
B	Other Lakes and Streams	263	0	51	7	0	0	0	0	1	0	0	0
C	Lakes and Streams	172	0	30	0	0	0	0	0	3	0	0	0
D	Plotnikof and Rezanof System Streams and Lakes	79	0	34	0	0	0	0	0	0	0	0	0
D	Eva Lake and Stream	67	0	0	0	1	1	0	0	14	0	0	0
D	Sitkoh Creek and Lake (Chichagof Island)	55	0	0	0	0	1	0	0	4	0	0	0
D	Katlian River	240	0	12	0	0	0	0	0	1	0	0	0
D	Nakwasina Sound Streams	152	0	0	0	0	0	0	0	0	0	0	0
D	Saook Bay Streams	236	0	0	0	0	0	0	0	19	0	0	0
D	Fish Bay Streams	24	0	0	0	0	0	0	0	0	0	0	0
D	Other Lakes	100	0	1	1	0	2	0	0	2	0	0	0
D	Other Streams	638	0	82	0	0	3	0	0	33	0	0	0
E	Dupont to Echo Cove (Juneau Road System)	29	0	13	0	0	0	0	0	7	0	0	0
E	Admiralty Island Streams	814	0	36	0	0	0	0	0	230	0	0	0
E	Chaik Bay Streams	211	0	2	0	0	0	0	0	53	0	0	0
E	Other Lakes and Streams	1,490	0	3	0	0	0	0	0	12	0	0	0
G	Mud Bay Creek (Chichagof Island)	103	0	0	0	0	0	0	0	41	0	0	0
G	Trail River (Chichagof Island)	104	0	0	0	0	0	0	0	2	0	0	0
G	Chicken Creek (Chichagof Island)	176	0	0	0	0	0	0	0	12	0	0	0
G	North Chichagof Island Streams	34	0	16	0	0	0	0	0	13	0	0	0
G	Other Lakes and Streams	66	0	30	0	0	0	0	0	0	0	0	0
H	Akwe River	521	42	657	1	2	0	0	0	24	0	0	0
H	Situk River (above weir)	1,166	0	578	498	16	0	1	0	7	0	0	0
H	Situk River (below weir)	116	0	33	311	0	0	0	0	15	0	0	0
H	Other Lakes and Streams	2,302	50	4,155	158	4	0	1	0	49	1	0	0
	Other Lakes and Streams in SE	546	0	0	85	0	0	0	0	5	0	0	0
	SE Total	10,730	92	5,931	1,087	25	7	2	0	602	1	0	0

Note: Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 08/12/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G30.–Freshwater logbook effort species released by area and site, Southeast Alaska 2008.

Area	Description	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Lake trout	Dolly Varden	Grayling	Pike	Sheefish
			King	Coho	Sockeye								
A	Lakes and Streams	568	0	22	1	81	550	1	0	33	0	0	0
B	Eagle Creek (Bear Creek)	52	0	1	0	98	30	32	0	140	0	0	0
B	Harris River	53	0	10	0	0	0	6	0	10	0	0	0
B	Luck Lake	28	0	3	0	36	13	0	0	28	0	0	0
B	Staney Creek	109	0	17	1	5	0	19	0	176	0	0	0
B	Thorne System Stream and Lake	176	0	35	0	80	5	35	0	323	0	0	0
B	Sweetwater System Stream and Lake	40	2	42	27	35	4	1	0	10	0	0	0
B	Other Lakes and Streams	263	0	50	55	114	43	6	0	580	0	0	0
C	Lakes and Streams	172	0	3	0	188	147	78	0	101	0	0	0
D	Plotnikof and Rezanof System Streams and Lakes	79	0	25	0	0	2	37	0	41	0	0	0
D	Eva Lake and Stream	67	0	4	0	36	30	1	0	159	0	0	0
D	Sitkoh Creek and Lake (Chichagof Island)	55	0	1	0	218	188	6	0	157	0	0	0
D	Katlian River	240	0	9	0	0	0	0	0	704	0	0	0
D	Nakwasina Sound Streams	152	0	3	0	0	0	1	0	561	0	0	0
D	Saook Bay Streams	236	0	0	0	2	2	8	0	726	0	0	0
D	Fish Bay Streams	24	0	0	0	0	0	0	0	54	0	0	0
D	Other Lakes	100	4	0	0	103	105	3	0	231	0	0	0
D	Other Streams	638	6	92	0	129	44	91	0	4,144	0	0	0
E	Dupont to Echo Cove (Juneau Road System)	29	0	50	5	0	0	0	0	20	0	0	0
E	Admiralty Island Streams	814	0	89	13	47	10	4	0	2,439	0	0	0
E	Chaik Bay Streams	211	0	10	0	10	15	1	0	3,018	0	0	0
E	Other Lakes and Streams	1,490	0	39	3	19	0	5	0	7,052	21	0	0
G	Mud Bay Creek (Chichagof Island)	103	0	0	0	0	0	0	0	1,175	0	0	0
G	Trail River (Chichagof Island)	104	0	15	0	0	0	0	0	159	0	0	0
G	Chicken Creek (Chichagof Island)	176	0	0	0	4	0	1	0	800	0	0	0
G	North Chichagof Island Streams	34	0	0	0	0	0	0	0	60	0	0	0
G	Other Lakes and Streams	66	0	5	0	1	0	0	0	163	0	0	0
H	Akwe River	521	47	2,232	3	150	2	39	0	268	0	0	0
H	Situk River (above weir)	1,166	0	773	378	0	18	2,407	61	12	1	0	0
H	Situk River (below weir)	116	0	3	203	0	0	2	0	9	0	0	0
H	Other Lakes and Streams	2,302	40	9,849	90	8	0	36	3	187	0	0	0
	Other Lakes and Streams in SE	546	0	0	164	1	0	0	0	421	12	0	0
	SE Total	10,730	99	13,382	943	1,365	1,208	2,820	64	23,961	34	0	0

Note: Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 08/12/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G31.–Freshwater logbook effort and species kept by area and site, Southcentral harvest, 2008.

Area	Description	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Lake trout	Dolly Varden	Grayling	Pike	Sheefish
			King	Coho	Sockeye								
J	Other Lakes	20	0	15	0	0	0	0	0	13	0	0	0
J	Other Streams	405	1	403	16	0	0	0	0	14	0	0	0
K	Knik Arm Lakes and Streams	1,889	419	1,361	3	0	1	0	0	0	0	0	0
M	Willow Creek	99	12	5	0	0	6	0	0	0	3	0	0
M	Clear Creek (Chunilna Creek)	265	8	120	12	0	0	0	0	0	0	0	0
M	Little Willow Creek	159	11	143	1	0	1	0	0	0	0	0	0
M	Indian River (into Susitna)	42	5	4	0	0	0	0	0	0	0	0	0
M	Talkeetna River	2,192	396	897	666	0	2	0	0	3	0	0	0
M	Other Lakes - East Susitna Drainage	33	0	0	0	0	3	0	2	0	9	0	0
M	Other Streams - East Susitna Drainage	389	91	117	1	0	20	0	0	2	0	9	0
M	Deshka River (Kroto Creek)	112	29	0	0	0	5	0	0	0	0	0	0
M	Lake Creek	3,415	546	1,562	281	0	80	0	0	0	0	19	0
M	Talachulitna River	2,592	382	1,455	192	0	0	0	0	5	5	6	0
M	Alexander Lake	45	0	0	0	0	0	0	0	0	0	8	0
M	Chelatna Lake	114	0	0	0	0	0	0	41	0	1	1	0
M	Eightmile Creek	115	43	157	0	0	0	0	0	0	0	8	0
M	Fish Lake Creek and Fish Lakes	408	78	82	91	0	0	0	0	0	0	248	0
M	Moose Creek (into Yentna)	59	21	28	1	0	0	0	0	0	0	0	0
M	Skwentna River	182	23	148	19	0	0	0	0	0	0	0	0
M	Susitna River	69	1	18	0	0	0	0	0	0	0	0	0
M	Yentna River Drainage (Remainder)	1,249	251	560	41	0	14	0	0	5	0	31	0
M	Yentna River	634	141	592	12	0	0	0	0	0	0	0	0
M	Deshka River (Kroto Creek) below weir	776	164	467	3	0	5	0	0	0	0	1	0
M	Indian Creek (into Yentna near Fish Lakes)	379	45	361	1	0	0	0	0	0	0	5	0
M	Other Lakes and Streams - West Susitna Drainage	282	36	83	4	0	1	0	0	0	0	117	0
M	Streams and Lakes	34	2	10	0	0	15	0	0	0	0	5	0
N	Chuitna River	221	24	265	0	0	0	0	0	0	0	0	0
N	Big River Lakes	5,329	15	9,401	4,006	0	0	0	0	8	0	0	0
N	Big River	16	0	31	11	0	0	0	0	0	0	0	0
N	Crescent Lake	245	0	133	79	0	0	0	11	82	0	3	0
N	Crescent River (Grecian River)	311	0	518	121	0	0	0	3	58	0	0	0
N	Kamishak River	255	0	352	0	0	0	0	0	29	0	0	0
N	Kustatan River	1,378	4	3,648	13	0	1	0	0	37	0	0	0
N	Silver Salmon Creek	142	0	108	2	0	0	0	0	14	0	0	0
N	Bachatna Creek	54	0	151	0	0	0	0	0	0	0	0	0
N	Other Sites North Forelands to Susitna Drainage	162	1	105	26	0	0	0	1	13	1	0	0
N	Other Sites (South of North Forelands)	241	5	218	21	0	0	0	0	6	0	0	0
N	Wolverine Creek (by Big River Lakes)	2,318	0	988	4,475	0	0	0	0	3	0	0	0
P	Anchor River	199	42	16	0	0	0	0	0	66	0	0	0
P	Ninilchik River	257	52	38	0	0	0	0	0	13	0	0	0
P	Deep Creek	178	0	106	0	0	0	0	0	28	0	0	0

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Area	Description	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Lake trout	Dolly Varden	Grayling	Pike	Sheefish
			King	Coho	Sockeye								
P	Russian River	299	0	1	203	0	0	0	0	0	0	0	0
P	Swanson River Canoe Route Lakes	58	0	0	0	0	3	0	0	0	1	0	0
P	Crescent Lake	125	0	0	173	0	0	0	1	11	123	0	0
P	Quartz Creek	53	0	0	0	0	0	0	0	6	0	0	0
P	Kasilof River below Highway	6,660	2,125	1,329	147	0	0	0	0	89	0	0	0
P	Kasilof River above Highway	89	9	78	4	0	1	0	0	3	0	0	0
P	Kasilof River reach not specified	316	132	6	17	0	0	0	0	2	0	0	0
P	Stocked Lakes	39	0	0	0	0	5	0	0	0	0	0	0
P	Other Lakes	177	0	0	5	0	17	0	0	0	2	0	0
P	Other Streams	408	0	185	3	0	0	0	0	1	0	0	0
P	Kenai River - Cook Inlet to Soldotna Bridge	30,234	6,522	8,823	621	0	73	0	0	76	0	0	0
P	Kenai River - Soldotna Bridge to Moose R	2,687	506	721	590	0	43	1	0	6	0	0	0
P	Kenai River - Moose River to Skilak Outlet	3,450	62	1,403	1,060	0	52	0	1	20	0	0	0
P	Kenai River - Skilak Inlet to Kenai Lake	7,572	3	196	2,947	0	68	0	5	76	0	0	0
P	Kenai River - reach not specified	557	74	102	154	0	1	0	0	0	0	0	0
Q	Buskin River	57	0	31	1	0	0	0	0	0	0	0	0
Q	Pasagshak River	115	0	42	43	0	0	0	0	8	0	0	0
Q	Roadside Streams	104	0	14	0	0	0	0	0	8	0	0	0
Q	Other Remote Lakes and Streams	998	2	363	631	0	1	0	0	103	0	0	0
Q	Roadside Lakes	169	0	69	3	0	0	0	0	15	0	0	0
Q	American River	39	0	4	0	0	0	0	0	6	0	0	0
Q	Buskin Lake	22	0	8	0	0	0	0	0	7	0	0	0
Q	Dog Salmon Creek (Frazer River)	343	10	0	894	0	0	0	0	20	0	0	0
Q	Olds River	69	0	18	0	0	0	0	0	0	0	0	0
Q	Ayakulik River (sometimes called Red River)	711	0	147	176	0	0	0	0	50	0	0	0
Q	Saltery River	1,171	11	444	1,147	0	0	0	13	379	1	0	0
Q	Uganik River	392	0	55	12	0	1	0	0	21	0	0	0
Q	Browns Lagoon River	55	0	22	5	0	0	0	0	8	0	0	0
Q	Zachar Bay Streams	102	0	74	0	0	0	0	0	40	0	0	0
Q	Karluk Lake and River above Weir	575	1	5	2	0	2	6	0	295	0	0	0
Q	Karluk Lagoon and River below Weir	600	0	604	609	0	4	0	0	58	0	0	0
R	Naknek River and Tributaries	1,881	361	1,136	586	0	1	0	0	0	0	0	0
R	Naknek Lake	233	0	0	0	0	0	0	5	3	0	3	0
R	Brooks River	833	0	1	10	0	0	0	0	0	0	0	0
R	Ugashik System	339	0	73	1	0	0	0	0	14	8	0	0
R	Becharof System	698	6	934	41	0	0	0	0	69	10	0	0
R	American Creek	1,574	0	9	0	0	31	0	3	66	0	0	0
R	Naknek R (Rapids Camp upstream to Naknek Lk)	1,706	82	1,523	1,720	0	11	0	0	15	0	0	0
R	Naknek River (dwnstream frm Rapids Camp)	686	298	422	209	0	0	0	0	3	1	0	0
R	Other Alaska Peninsula / Aleutian Streams	2,742	499	1,518	402	0	0	0	31	71	0	0	0
R	Other Alaska Peninsula / Aleutian Lakes	101	0	74	17	0	0	0	0	6	0	0	0

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Area	Description	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Lake trout	Dolly Varden	Grayling	Pike	Sheefish
			King	Coho	Sockeye								
R	Other Streams	267	0	286	6	0	0	0	0	12	6	0	0
S	Kvichak River	2,218	66	357	2,267	0	29	0	0	4	27	0	0
S	Lower Talarik Creek	143	0	5	0	0	0	0	0	0	0	0	0
S	Copper River (Lake Iliamna Area)	1,390	0	0	236	0	0	0	0	0	0	0	0
S	Gibraltar Lake	69	0	0	3	0	0	0	0	0	0	0	0
S	Newhalen River	441	0	3	1,099	0	0	0	0	0	1	0	0
S	Alagnak (Branch) River	4,173	308	663	3,787	0	13	0	5	25	22	0	0
S	Lake Clark	330	0	0	2	0	0	0	3	0	0	0	0
S	Kulik River	1,448	0	0	0	0	50	0	0	0	0	0	0
S	Lake Iliamna	675	0	15	642	0	15	0	0	0	0	0	0
S	Nonvianuk Lake	79	0	0	19	0	1	0	4	0	0	0	0
S	Nonvianuk River (into Alagnak)	399	0	0	32	0	4	0	17	0	0	0	0
S	Pike Lakes	17	0	0	0	0	0	0	0	0	0	1	0
S	Tazimina River	141	0	0	2	0	0	0	0	0	2	0	0
S	Moraine Creek	1,237	0	0	4	0	27	0	0	0	4	0	0
S	Upper Talarik Creek	111	0	96	0	0	0	0	0	0	0	0	0
S	Battle River	364	0	0	0	0	17	0	0	0	0	0	0
S	Funnel Creek	103	0	0	0	0	3	0	0	0	0	0	0
S	Nanuktuk Creek	302	0	0	0	0	0	0	0	0	0	0	0
S	Kijik River	64	0	0	0	0	0	0	0	0	1	0	0
S	Kijik Lake	40	0	0	0	0	0	0	7	6	2	0	0
S	Gibraltar River	265	0	0	40	0	0	0	0	0	0	0	0
S	Kukaklek River (Big Ku) (into Alagnak)	549	0	0	276	0	4	0	1	0	0	0	0
S	Battle Lake	12	0	0	0	0	0	0	0	0	0	0	0
S	Little Kulik (into Nanuktuk Creek)	141	0	0	0	0	0	0	0	0	0	0	0
S	Other Lakes and Streams	62	0	10	0	0	0	0	0	0	0	0	0
T	Nushagak River System	913	245	52	3	0	5	0	0	3	0	1	0
T	Wood River Lakes System	768	14	317	154	0	2	0	0	14	2	1	0
T	Tikchik-Nuyakuk Lake System	355	0	0	120	0	1	0	9	1	5	21	0
T	Togiak River System	1,818	685	1,945	269	0	10	2	0	44	0	0	0
T	Mulchatna River	421	52	2	81	0	11	0	1	16	17	0	0
T	Agulowak River	1,073	0	26	995	0	0	0	0	14	2	2	0
T	Aleknagik Lake	148	0	67	41	0	0	0	0	0	0	3	0
T	Agulukpak River	480	0	0	6	0	6	0	0	11	0	0	0
T	Nushagak R - upstream of Mulchatna River	330	19	196	2	0	0	0	0	1	0	0	0
T	Nushagak River - Black Point to Sonar Site	3,178	1,825	296	16	0	2	0	0	3	0	0	0
T	Nushagak River - Sonar Site to Mulchatna	4,560	2,500	1,592	41	0	6	0	0	1	3	2	1
T	Other Lakes	57	0	0	0	0	0	0	0	0	0	1	0
T	Other Streams	788	46	472	81	0	0	0	0	0	0	0	0
	Other Lakes and Streams in SC	364	1	296	51	0	0	0	0	24	0	0	0
	SC Total	126,596	19,312	51,796	32,806	0	674	9	164	2,133	259	496	1

Note: Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 08/12/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G32.–Freshwater logbook effort and species released by area and site, Southcentral Alaska, 2008.

Area	Description	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Lake trout	Dolly Varden	Grayling	Pike	Sheefish
			King	Coho	Sockeye								
J	Other Lakes	20	0	7	0	0	0	0	0	31	0	0	0
J	Other Streams	405	3	1,662	4	4	5	0	0	86	0	0	0
K	Knik Arm Lakes and Streams	1,889	40	146	0	0	246	0	0	0	0	0	0
M	Willow Creek	99	4	13	0	0	228	0	0	4	10	0	0
M	Clear Creek (Chunilna Creek)	265	22	32	18	0	55	0	0	23	13	0	0
M	Little Willow Creek	159	9	53	0	0	26	0	0	1	10	0	0
M	Indian River (into Susitna)	42	11	7	0	0	16	0	0	0	29	0	0
M	Talkeetna River	2,192	418	760	643	0	302	0	2	249	56	0	0
M	Other Lakes - East Susitna Drainage	33	0	0	4	0	7	0	4	128	101	48	0
M	Other Streams - East Susitna Drainage	389	24	38	18	0	202	0	0	8	10	12	0
M	Deshka River (Kroto Creek)	112	31	0	0	0	47	0	0	0	0	0	0
M	Lake Creek	3,415	355	728	370	0	2,594	0	0	1	1,024	35	0
M	Talachulitna River	2,592	991	2,918	599	0	1,266	0	0	137	589	56	0
M	Alexander Lake	45	0	0	0	0	0	0	0	0	0	723	0
M	Chelatna Lake	114	0	0	24	0	143	0	199	0	37	28	0
M	Eightmile Creek	115	9	147	0	0	6	0	0	0	0	0	0
M	Fish Lake Creek and Fish Lakes	408	16	23	49	0	0	0	0	0	0	87	0
M	Moose Creek (into Yentna)	59	18	4	0	0	0	0	0	0	0	0	0
M	Skwentna River	182	38	231	14	0	21	0	0	0	8	0	0
M	Susitna River	69	18	15	0	0	9	0	0	2	24	0	0
M	Yentna River Drainage (Remainder)	1,249	396	1,023	129	0	1,005	0	0	345	204	43	0
M	Yentna River	634	30	155	22	0	21	0	0	0	0	0	0
M	Deshka River (Kroto Creek) below weir	776	27	133	3	0	142	0	0	0	3	1	0
M	Indian Creek (into Yentna near Fish Lakes)	379	28	17	0	0	10	0	0	0	0	2	0
M	Other Lakes and Streams - West Susitna Drainage	282	13	140	5	0	4	0	0	2	11	310	0
M	Streams and Lakes	34	0	0	0	0	0	0	0	0	0	13	0
N	Chuitna River	221	14	428	0	0	22	0	0	31	0	0	0
N	Big River Lakes	5,329	0	1,574	6,553	0	2	0	0	72	0	0	0
N	Big River	16	0	12	2	0	0	0	0	29	0	0	0
N	Crescent Lake	245	4	6	89	0	89	0	57	1,105	42	14	0
N	Crescent River (Grecian River)	311	3	114	78	0	0	0	26	1,080	0	0	0
N	Kamishak River	255	0	477	0	0	0	0	0	1,606	5	0	0
N	Kustatan River	1,378	6	889	0	0	4	0	0	357	0	0	0
N	Silver Salmon Creek	142	0	222	2	0	0	0	0	197	0	0	0
N	Bachatna Creek	54	0	225	0	0	0	0	0	2	0	0	0
N	Other Sites North Forelands to Susitna Drainage	162	11	9	30	0	54	0	0	527	2	0	0
N	Other Sites (South of North Forelands)	241	1	332	15	0	3	0	0	670	0	0	0
N	Wolverine Creek (by Big River Lakes)	2,318	0	303	5,475	0	0	0	0	4	0	0	0
P	Anchor River	199	15	6	0	0	6	30	0	748	0	0	0
P	Ninilchik River	257	183	7	0	0	0	13	0	34	0	0	0
P	Deep Creek	178	94	41	0	0	2	45	0	78	0	0	0

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Area	Description	Angler Days	Salmon										
			King	Coho	Sockeye	Cutthroat	Rainbow	Steelhead	Laake trout	Dolly Varden	Grayling	Pike	Sheefish
P	Russian River	299	0	1	164	0	525	0	0	111	1	0	0
P	Swanson River Canoe Route Lakes	58	0	0	0	0	161	0	0	0	0	0	0
P	Crescent Lake	125	1	0	39	0	30	0	8	74	107	0	0
P	Quartz Creek	53	0	0	26	0	15	0	0	625	1	0	0
P	Kasilof River below Highway	6,660	990	29	29	0	128	337	7	917	0	0	0
P	Kasilof River above Highway	89	7	0	0	0	12	7	0	12	0	0	0
P	Kasilof River reach not specified	316	55	5	0	0	12	1	0	13	0	0	0
P	Stocked Lakes	39	0	12	0	0	142	0	0	0	57	0	0
P	Other Lakes	177	0	15	12	0	553	0	0	83	302	0	0
P	Other Streams	408	1	307	42	0	241	14	0	798	121	0	0
P	Kenai River - Cook Inlet to Soldotna Bridge	30,234	2,304	310	130	0	2,111	0	0	1,202	0	0	0
P	Kenai River - Soldotna Bridge to Moose R	2,687	192	86	284	0	3,599	23	1	979	0	0	0
P	Kenai River - Moose River to Skilak Outlet	3,450	44	259	631	0	17,164	1	9	9,983	10	0	0
P	Kenai River - Skilak Inlet to Kenai Lake	7,572	14	132	2,179	1	26,761	2	41	28,552	29	1	0
P	Kenai River - reach not specified	557	33	29	24	0	900	0	0	1,409	0	0	0
Q	Buskin River	57	0	5	0	0	1	0	0	156	0	0	0
Q	Pasagshak River	115	0	121	10	0	0	0	0	17	0	0	0
Q	Roadside Streams	104	0	32	0	0	0	0	0	100	0	0	0
Q	Other Remote Lakes and Streams	998	158	470	2,059	0	76	85	0	1,297	8	0	0
Q	Roadside Lakes	169	0	161	15	0	0	0	0	34	0	0	0
Q	American River	39	0	1	0	0	0	0	0	200	0	0	0
Q	Buskin Lake	22	0	1	0	0	0	0	0	100	0	0	0
Q	Dog Salmon Creek (Frazer River)	343	12	60	1,181	0	10	51	0	146	0	0	0
Q	Olds River	69	0	2	2	0	0	0	0	114	0	0	0
Q	Ayakulik River (sometimes called Red River)	711	174	1,557	782	0	17	308	1	2,458	0	0	0
Q	Saltery River	1,171	0	231	885	0	59	3	10	3,232	2	0	0
Q	Uganik River	392	0	178	3	0	411	0	0	3,542	0	0	0
Q	Browns Lagoon River	55	0	0	0	0	0	0	0	19	0	0	0
Q	Zachar Bay Streams	102	0	72	0	0	0	0	0	44	0	0	0
Q	Karluk Lake and River above Weir	575	107	214	523	0	36	321	0	3,639	0	0	0
Q	Karluk Lagoon and River below Weir	600	7	204	369	0	0	21	0	576	0	0	0
R	Naknek River and Tributaries	1,881	425	959	616	1	4,281	0	742	1,666	776	55	0
R	Naknek Lake	233	0	5	52	0	956	7	418	163	93	164	0
R	Brooks River	833	0	1	819	3	4,108	0	41	99	6	0	0
R	Ugashik System	339	397	344	61	0	89	0	4	1,276	329	2	0
R	Becharof System	698	15	1,696	100	0	606	0	0	3,650	587	0	0
R	American Creek	1,574	0	6	261	0	7,532	0	18	13,329	81	8	0
R	Naknek R (Rapids Camp upstream to Naknek Lk)	1,706	310	344	1,082	0	3,319	0	12	456	46	11	0
R	Naknek River (dwnstream frm Rapids Camp)	686	147	118	249	0	246	0	0	10	0	45	0
R	Other Alaska Peninsula / AleutianStreams	2,742	1,679	6,231	500	0	560	490	27	3,673	1	0	0
R	Other Alaska Peninsula / Aleutian Lakes	101	0	206	7	0	251	0	50	32	8	0	0

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Area	Description	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Lake trout	Dolly Varden	Grayling	Pike	Sheefish
			King	Coho	Sockeye								
R	Other Streams	267	2	993	8	0	995	0	2	304	53	35	0
S	Kvichak River	2,218	122	1,428	4,167	0	13,833	0	1	69	4,443	4	0
S	Lower Talarik Creek	143	0	66	11	0	1,837	0	0	6	60	0	0
S	Copper River (Lake Iliamna Area)	1,390	0	3	556	0	16,486	22	8	77	12	44	0
S	Gibraltar Lake	69	0	1	17	0	497	0	0	1	30	0	0
S	Newhalen River	441	0	2	629	0	502	0	30	35	471	126	0
S	Alagnak (Branch) River	4,173	1,064	1,347	5,162	1	9,659	2	49	388	3,253	3	1
S	Lake Clark	330	0	0	17	0	8	0	78	105	934	1,121	0
S	Kulik River	1,448	32	0	94	0	17,507	0	544	43	50	0	0
S	Lake Iliamna	675	0	0	1,698	0	1,525	4	2	2,238	0	10	0
S	Nonvianuk Lake	79	0	57	0	0	603	0	76	0	6	0	0
S	Nonvianuk River (into Alagnak)	399	1	47	111	14	3,057	0	70	28	6	0	0
S	Pike Lakes	17	0	0	0	0	0	0	0	0	0	101	0
S	Tazimina River	141	0	0	27	0	445	0	2	50	1,285	0	0
S	Moraine Creek	1,237	0	1	477	0	12,974	0	9	76	268	0	0
S	Upper Talarik Creek	111	0	129	25	0	540	0	1	0	1	0	0
S	Battle River	364	0	3	242	0	2,193	0	2	0	93	0	0
S	Funnel Creek	103	0	0	0	0	882	0	0	3	2	0	0
S	Nanuktuk Creek	302	0	0	20	0	3,714	0	1	668	100	0	0
S	Kijik River	64	0	0	0	0	0	0	0	0	617	0	0
S	Kijik Lake	40	0	0	0	0	0	0	35	30	185	0	0
S	Gibraltar River	265	0	3	192	0	3,992	0	0	0	6	0	0
S	Kukaklek River (Big Ku) (into Alagnak)	549	1	0	97	0	4,241	0	7	23	151	10	0
S	Battle Lake	12	0	0	0	0	104	0	3	0	0	0	0
S	Little Kulik (into Nanuktuk Creek)	141	0	0	2	0	1,469	0	1	125	9	0	0
S	Other Lakes and Streams	62	0	19	12	0	423	0	0	1	0	40	0
T	Nushagak River System	913	656	192	44	1	2,413	5	0	2,208	2,552	29	0
T	Wood River Lakes System	768	150	766	540	0	811	0	3	783	894	1,162	0
T	Tikchik-Nuyakuk Lake System	355	5	90	202	0	222	1	516	63	1,189	228	0
T	Togiak River System	1,818	1,211	8,489	247	1	874	0	65	3,974	54	32	0
T	Mulchatna River	421	218	563	47	0	780	5	28	954	1,722	15	0
T	Agulowak River	1,073	0	12	1,135	0	6,124	0	0	1,517	1,495	265	0
T	Aleknagik Lake	148	0	77	77	0	158	0	0	147	17	325	0
T	Agulukpak River	480	0	0	418	0	2,381	0	7	825	495	664	0
T	Nushagak R- upstream of Mulchatna River	330	40	282	22	0	1,518	0	0	1,105	1,183	0	0
T	Nushagak River - Black Point to Sonar Site	3,178	7,973	887	0	0	6	0	0	4	0	1	0
T	Nushagak River - Sonar Site to Mulchatna	4,560	8,434	7,420	68	0	136	1	14	134	155	40	1
T	Other Lakes	57	2	39	20	0	51	0	20	19	488	23	0
T	Other Streams	788	250	3,382	183	0	650	0	0	99	1,087	76	0
	Other Lakes and Streams in SC	364	29	28	7	0	90	0	0	381	21	0	0
	SC Total	126,596	30,094	53,627	43,856	26	195,149	1,799	3,251	108,826	28,130	6,012	2

Note: Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 08/12/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G33.–Freshwater logbook effort and species kept by area and site, AYK Alaska, 2008.

Area	Description	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Lake trout	Dolly Varden	Grayling	Pike	Sheefish
			King	Coho	Sockeye								
I	Klutina River	1,571	688	4	266	0	4	0	0	84	21	0	0
I	Gulkana River (reach unspecified)	239	120	0	0	0	0	0	0	0	8	0	0
I	Gulkana River (West Fork to Highway)	754	384	0	11	0	0	2	0	1	0	0	0
I	Other Lakes and Streams	28	6	0	0	0	0	0	2	0	0	0	0
U	Other Lakes	946	0	117	9	0	68	0	0	1	2	20	0
U	Other Streams	210	10	36	0	0	0	0	0	3	10	0	0
V	Kanektok River (Quinhagak, Chosen)	2,812	243	813	194	0	0	0	0	39	1	0	0
V	Goodnews River	1,059	82	294	120	0	5	0	0	31	0	0	0
V	Aniak River	831	31	126	3	0	1	0	0	22	7	12	6
V	Holitna River	536	184	65	37	0	0	0	0	12	5	24	20
V	Lakes and Streams - Kuskokwim Bay	203	1	2	0	0	0	0	0	1	0	0	0
V	Other Lakes and Streams - Kuskokwim Drainage	662	0	90	3	0	0	0	3	7	6	0	0
W	Streams of Seward Peninsula/Norton Sound	920	49	972	4	0	0	0	0	225	8	0	0
Y	Streams of the Yukon River Drainage	992	72	244	1	0	0	0	0	5	15	12	8
	Other Lakes and Streams in AYK	70	0	0	0	0	0	0	0	0	0	1	26
	AYK Total	11,833	1,870	2,763	648	0	78	2	5	431	83	69	60

Note: Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 08/12/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G34.–Freshwater logbook effort and species released by area and site, AYK Alaska, 2008.

Area	Description	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Lake trout	Dolly Varden	Grayling	Pike	Sheefish
			King	Coho	Sockeye								
I	Klutina River	1,571	193	1	58	0	5	0	0	12	18	0	1
I	Gulkana River (reach unspecified)	239	111	0	0	0	10	0	0	0	192	0	0
I	Gulkana River (West Fork to Highway)	754	226	0	4	0	17	0	21	1	10	0	0
I	Other Lakes and Streams	28	6	0	0	0	0	0	46	25	148	0	0
U	Other Lakes	946	0	31	9	0	772	0	0	1	189	54	0
U	Other Streams	210	3	28	0	0	1	0	0	15	1,288	100	4
V	Kanektok River (Quinhagak, Chosen)	2,812	842	6,041	588	1	7,195	0	2	9,737	1,501	26	0
V	Goodnews River	1,059	497	3,389	156	0	1,709	0	1	4,176	300	0	0
V	Aniak River	831	957	2,635	65	0	3,694	0	6	3,968	1,902	184	145
V	Holitna River	536	429	170	49	0	9	0	0	746	494	1,032	231
V	Lakes and Streams - Kuskokwim Bay	203	14	284	20	0	810	0	66	356	166	1	0
V	Other Lakes and Streams - Kuskokwim Drainage	662	149	1,149	17	0	5,730	0	16	6,025	2,753	3	0
W	Streams	920	373	5,036	5	0	0	0	0	2,770	1,636	25	6
Y	Streams	992	366	1,559	25	0	0	0	0	548	5,292	6,257	64
	Other Lakes and Streams in AYK	70	0	0	0	0	0	0	0	33	22	15	201
	AYK Total	11,833	4,166	20,323	996	1	19,952	0	158	28,413	15,911	7,697	652

Note: Responses of 3 or less businesses are not reported separately, to protect confidentiality of respondent. Data are current as of 08/12/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G35.–Freshwater logbook effort and species kept by region, Statewide, 2008.

Region	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Lake trout	Dolly Varden	Grayling	Pike	Sheefish
		King	Coho	Sockeye								
SE	10,730	92	5,931	1,087	25	7	2	0	602	1	0	0
SC	126,596	19,312	51,796	32,806	0	674	9	164	2,133	259	496	1
AYK	11,833	1,870	2,763	648	0	78	2	5	431	83	69	60
Total	149,159	21,274	60,490	34,541	25	759	13	169	3,166	343	565	61

Note: Data are current as of 08/12/2009.

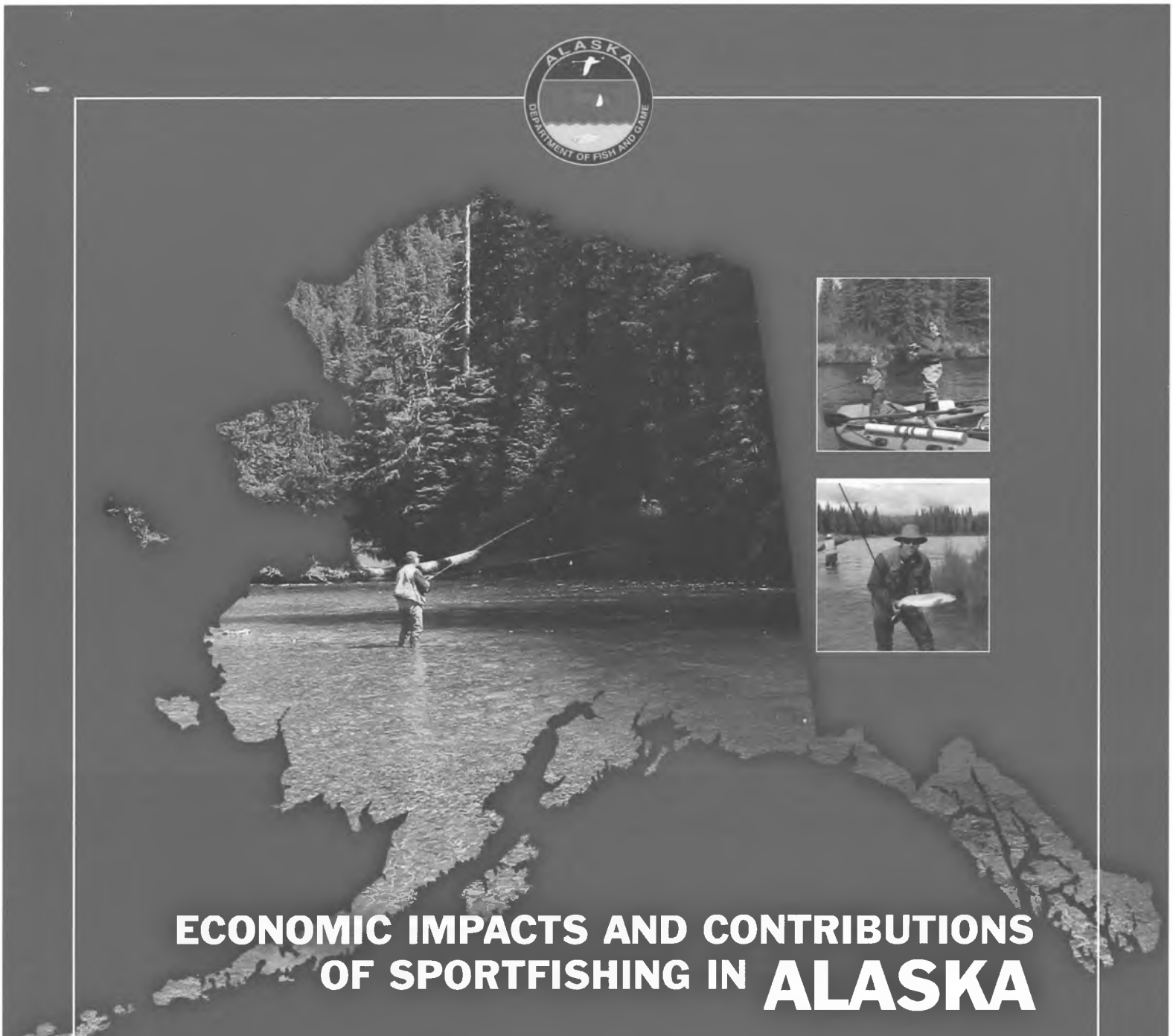
[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.

Appendix G36.–Freshwater logbook effort and species released by region, Statewide, 2008.

Region	Angler Days	Salmon			Cutthroat	Rainbow	Steelhead	Lake trout	Dolly Varden	Grayling	Pike	Sheefish
		King	Coho	Sockeye								
SE	10,730	99	13,382	943	1,365	1,208	2,820	64	23,961	34	0	0
SC	364	29	28	7	0	90	0	0	381	21	0	0
AYK	11,833	4,166	20,323	996	1	19,952	0	158	28,413	15,911	7,697	652
Total	149,159	34,359	87,332	45,795	1,392	216,309	4,619	3,473	161,200	44,075	13,709	654

Note: Data are current as of 08/12/2009.

[a] Regional and statewide business and guide totals aren't additive because a business and/or guide can operate in multiple sites and areas.



ECONOMIC IMPACTS AND CONTRIBUTIONS OF SPORTFISHING IN ALASKA



2007 REPORT



A Message from the Director

CHARLIE SWANTON, DIRECTOR
ADF&G, DIVISION OF SPORT FISH

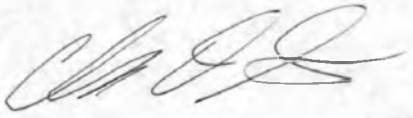
Alaska supports arguably some of the finest and most diverse sportfishing in the world. These opportunities provide Alaskans with a significant and sustainable source of food, relaxation, and social benefits. Additionally, the money spent by residents and visitors who participate in sportfishing activities produces significant economic benefits to Alaska.

The Division of Sport Fish is committed to providing an array of biological, social and economic information to fishery managers and fishery regulators who plan and evaluate fishery projects and make informed decisions about the management of fishery resources.

This report summarizes a recent effort by the Division to provide estimates of angler spending in Alaska and the contribution it makes to Alaska's economy. The results are based on an extensive statewide study of resident and nonresident anglers who went sportfishing in Alaska during 2007. The report contains estimates of the total expenditures on sportfishing by anglers and estimates of the subsequent economic effects this spending had in terms of employment, wages, salaries and tax receipts.

A key objective of this project was to establish a consistent and repeatable methodology for collecting and reporting estimates of economic contribution in Alaska such that reasonably precise estimates would be routinely available to agency personnel, fisheries decision-makers, and the public.

We hope that you find the following information useful and that it contributes to well-informed decision making.





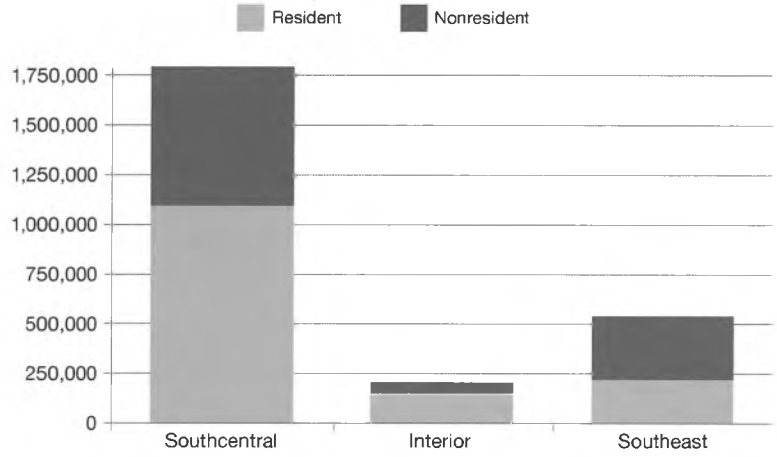
Sportfishing in ALASKA

Sportfishing is an important component of the Alaskan economy. It contributes to the well-being of Alaskans as recreation, as a source of food, and as part of the state's collective economic fabric. In 2007, 190,644 Alaska residents bought a fishing license, along with 284,890 nonresidents.

Spending a day fishing with rod and reel usually involves spending at least some money for travel, equipment, and supplies. Because a large number of anglers—both resident and nonresident—spend many days each year enjoying Alaska's diverse fishing opportunities, the annual total of that spending is substantial.

The money spent by anglers in turn helps to support thousands of Alaskan jobs in industries ranging from fishing tackle sales to hospitality and lodging to air taxi and guide services which are an important part of the economy in many of Alaska's local communities. At the same time, angler spending is also creating federal, state and local tax revenues which support local and borough governments and help pay for fisheries management in Alaska.

DAYS OF SPORTFISHING IN ALASKA BY REGIONS AND RESIDENCY, 2007

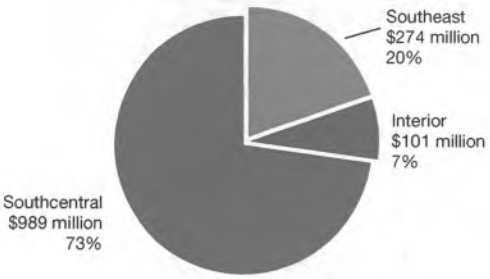


TOTAL SPORTFISHING EXPENDITURES, All ANGLERS

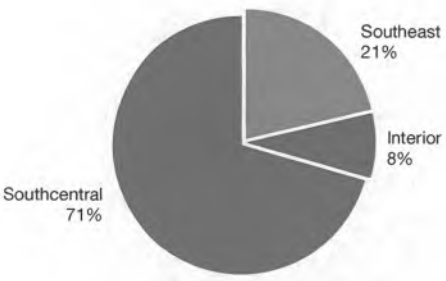
$1.4 billion



SPORTFISHING EXPENDITURES BY REGION, ALL ANGLERS



DAYS OF SPORTFISHING BY REGION, ALL ANGLERS









Economic Impact vs. Economic Contribution

This project measured and reported the economic impacts and contributions of licensed anglers to Alaska's state and regional economies. The words "impact" and "contribution" are not necessarily synonymous.

Economic impact typically refers to the effects of money being brought in from outside the state or region. It was possible to estimate the total amount of resident and nonresident spending in Alaska as a whole and within specific regions by combining the economic survey results with the ADF&G Statewide Harvest Survey results.

Economic contribution refers to in-state spending by all anglers. In theory, if the dollars spent by resident anglers were not spent on sportfishing, the same money would be spent on other things and would still stimulate economic activity. It isn't possible to accurately predict whether these local dollars would be spent in or outside of Alaska.

This study generated both economic impact estimates (non-resident spending) as well as estimates of the economic contributions of spending by Alaska anglers in 2007.

Economic IMPACTS & Contributions

The purpose of the study was to obtain current estimates of the economic contribution of sportfishing activities to the Alaska economy and to develop a consistent method for producing such estimates on a regular basis. This project provides a survey-based process that can now be updated periodically at reasonable cost.

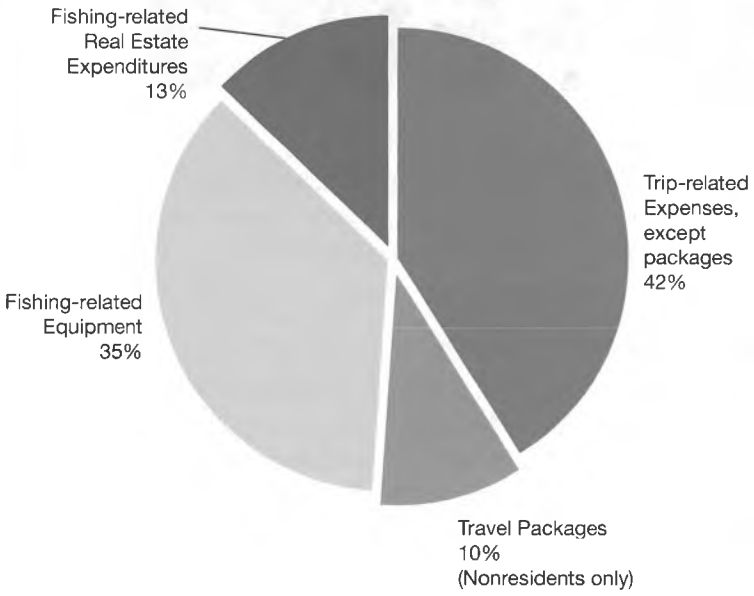
For 2007, the year covered by this report, 1,163 resident and 1,807 nonresident surveys were completed by anglers who fished in Alaska. From the survey responses collected, estimates of how much each angler spends per day of fishing and per year on fishing-related equipment were produced. These survey results were combined with the total number of licensed anglers in 2007 and the total days of fishing in Alaska as estimated by the Division's Statewide Harvest Survey. This survey, conducted every year by the Division, tracks annual sportfishing participation and harvest. By combining the economic survey results with the Statewide Harvest Survey results, it was possible to estimate the total amount of resident and nonresident spending in Alaska as a whole and within specific regions of the state.

An economic model was then used to estimate the additional economic effects that angler spending produced within each region of the state. Using the collective dollars spent by anglers, an economic model known as IMPLAN estimated the total jobs, tax revenues and other economic contributions. Regional as well as statewide totals can be determined and are summarized in the following pages. Information on the dollars associated with guided fishing trips and with nonresident fishing is also included. First, here are some statewide highlights.

Total Resident and Nonresident Sportfishing Expenditures, by Category

	Resident Anglers	Nonresident Anglers	All Anglers
Licenses and Fees	$6,627,558	$16,536,955	$23,164,513
Trip Expenditures (non-package)	$219,829,151	$347,358,999	$567,188,150
Package Expenditures	n/a	$137,519,700	$137,519,700
Equipment Expenditures	$433,693,104	$41,385,450	$475,078,554
Real Estate Expenditures	$73,139,537	$109,697,619	$182,837,156
Total Expenditures	**$733,289,349**	**$652,498,723**	**$1,385,788,072**

TOTAL ANGLER SPENDING BY CATEGORY



Average Per Day Expenditure for Trip-Related Items Only, Including Package Trips

(Lodging, fuel, food, travel packages, etc.)

	Per Day
All Alaska Fishing Combined	**$277.46**
Residents Only	$150.63
Non-Residents Only	$448.78
Saltwater	
Residents, Unguided	$162.81
Residents, Guided	$466.53
Non-Residents, Unguided	$209.40
Non-Residents, Guided	$744.03
Freshwater	
Residents, Unguided	$91.73
Residents, Guided	$509.56
Non-Residents, Unguided	$213.24
Non-Residents, Guided	$790.41

ECONOMIC ACTIVITY, OR MULTIPLIER EFFECT: SUPPORTED BY GUIDED AND UNGUIDED FISHING TRIPS

Trip-related and Package Expenditures*



JOBS: SUPPORTED BY GUIDED AND UNGUIDED FISHING TRIPS

Trip-related and Package Expenditures*



*Only trip related expenditures (food, fuel, lodging, etc.) could be divided into guided and unguided portions. It was not possible to divide equipment expenditures in such a manner.







How Economic Effects Occur

While the economic effects of sportfishing occur on a large scale statewide, it's important to note that they happen one angler at a time.

Suppose, for example, that a construction worker in downtown Anchorage decides to go fishing on his day off. He stops after work at the local tackle shop and spends $250 for a rod and reel along with some line, lures, a knife and cooler. Sandwiches, soda, and ice for the trip come from the local grocery store, and he spends still more money to fill his vehicle with gas on the way home. Very early the next morning, he starts the 150-mile drive out the Seward and Sterling highways to the Kenai River where he'll fish for king or coho salmon.

Meanwhile, the money he left behind goes to work. Some of the money he spent for fishing gear helps to pay the wages of a sales clerk, for example, who in turn spends some that evening at a local restaurant, to buy groceries, or pays his utility bill at the local light and power company. These payments, known collectively as the "multiplier effect", help to support still other jobs as the money our angler spent ripples outward in many directions through the local economy, even to those sectors not directly related to fishing. See page 11 for more definitions.

Regional Economic EFFECTS

Economic effects can be measured regionally and locally as well as statewide. Alaska has several distinct regions, each with its own characteristic sport fisheries that show different patterns in angling participation, spending, and economic effects.

STATEWIDE RESULTS

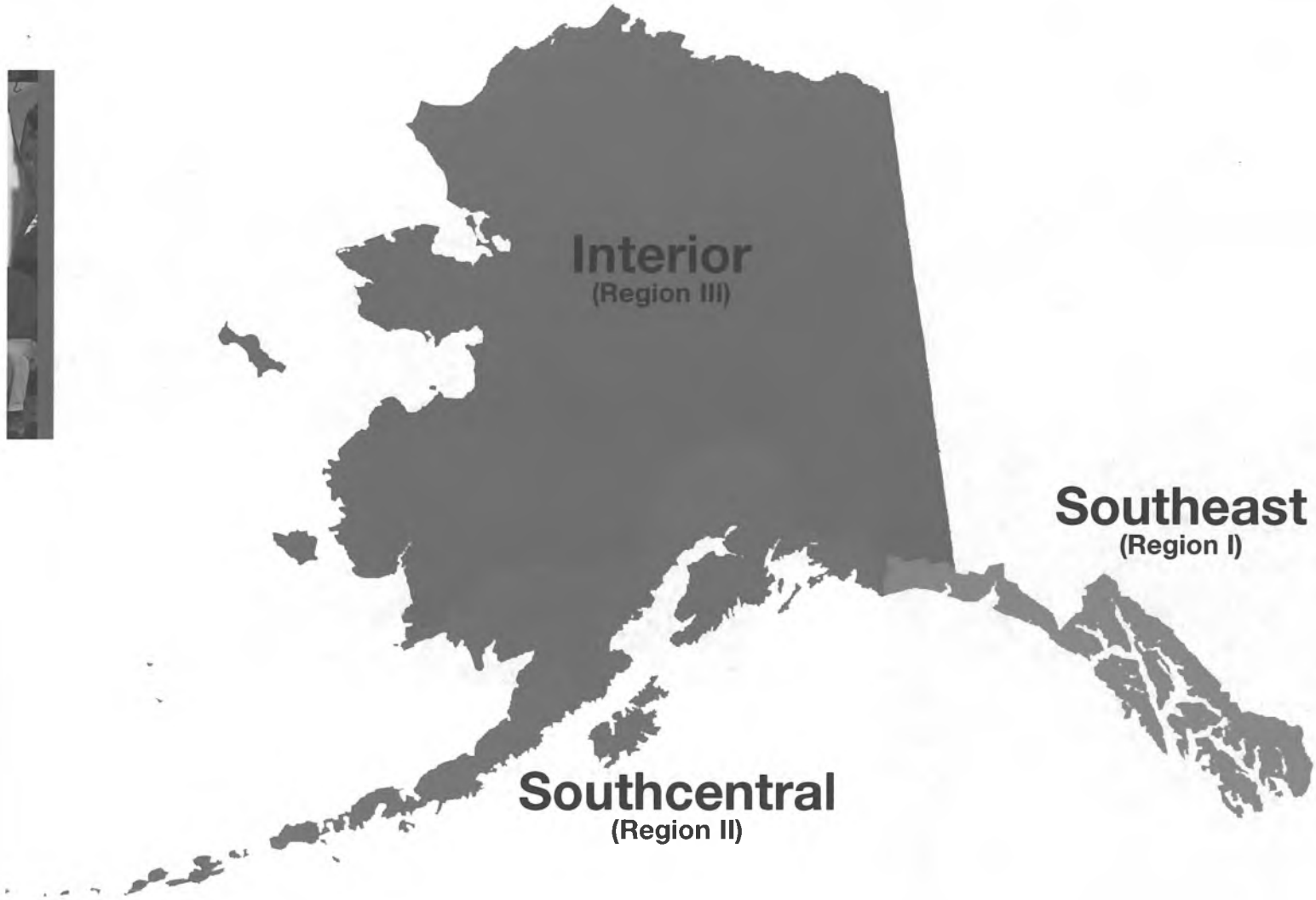
Alaska is blessed with many world-class freshwater and marine fisheries. In 2007, resident and nonresident anglers spent nearly $1.4 billion on equipment, boats, and trip-related and other items. Alaska anglers on average spent $2,914 on sportfishing trip expenses, fishing-related equipment, licenses, and other items in 2007. The actual amount spent per angler varies based on his or her preferred fishing locations, region, and more. Details are available in the technical report (see sidebar on page 8).

As anglers' expenditures exchange hands, economic contributions are generated statewide. In 2007, these contributions amounted to 15,879 jobs, $246 million in tax revenues and $545 million in income. Economic output, which is the value of all goods and services produced by businesses as a result of anglers' expenditures, was just over $1.6 billion.

SOUTHEAST (REGION I)

The so-called Panhandle area extending roughly from Yakutat south-southwest through Juneau and Ketchikan to the British Columbia border is a complex maze of islands, straits, and mountains. The saltwater salmon fishing here is outstanding, although some anglers find steelhead, along with river-resident trout, to be just as appealing.

Total spending by all anglers, resident and nonresident combined, for Southeast Alaska in 2007 was estimated to be $274 million. The total economic output came to $295 million, which supported 3,063 jobs and generated $22 million in state and local taxes.



SOUTHEAST MARINE (SUBREGION)

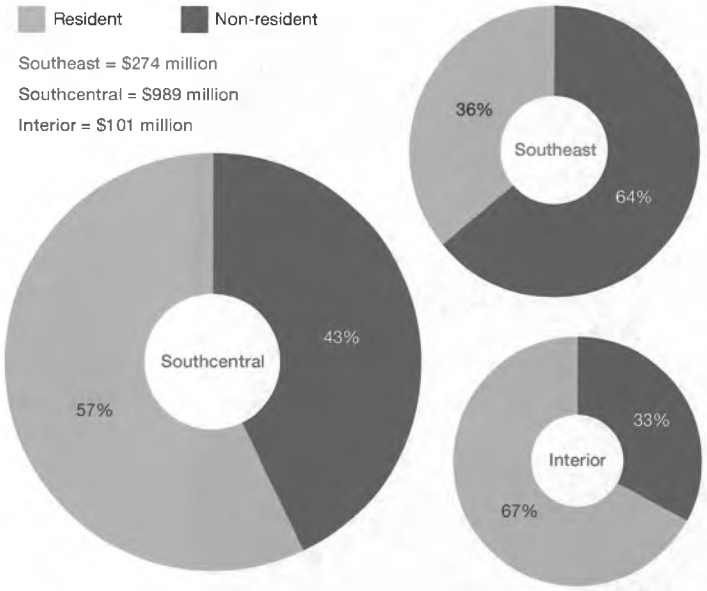
Within southeast Alaska, the popularity of salt-water fishing accounted for almost half of all angler spending. Saltwater anglers in southeast Alaska spent $132 million of the $274 million spent on sportfishing in southeast Alaska in 2007, which supported 1,897 jobs and created $14 million in state and local tax revenues.

SOUTHCENTRAL (REGION II)

This is by far the most popular angling region in Alaska as measured in total angler days. It includes Prince William Sound, Cook Inlet and the Anchorage area, as well as Kodiak Island and the Bristol Bay area to the west of Cook Inlet. All five salmon species are fished widely here in both salt- and fresh-water, along with halibut and other saltwater species. Trophy rainbow trout in the various Bristol Bay drainages are world-famous.

Anglers spent $989 million in the Southcentral region in 2007, supporting 11,535 area jobs and creating $91 million in state and local taxes.

RESIDENT AND NONRESIDENT EXPENDITURES BY REGION



Economic measures reported in this chart are based on regional IMPLAN model outputs using 2007 angler expenditures.







For More Details...

This report is a summary of a 300 page technical report available free from the Alaska Department of Fish and Game, Division of Sport Fish. The complete report presents detailed descriptions of the methods and data sources used in the study, as well as the complete results. Visit ***www.sf.adfg.state.ak.us/statewide/economics*** *to download a copy in PDF form. You may also contact the Department at (907) 267-2366, or william.romberg@alaska.gov, to request a printed copy of the report.*

Regional Economic EFFECTS *(cont.)*

COOK INLET (SUBREGION)

Notably, much of Southcentral's economic activity centers around the Cook Inlet area, partly because Anchorage and the Matanuska-Susitna valley are such large population centers with good fishing nearby. The Kenai River, for example, is an easy drive from Anchorage and is widely known among anglers as one of the world's foremost salmon rivers. In addition, there are large sport fisheries for halibut and other groundfish that are accessed from several communities that border Cook Inlet. In the Cook Inlet subregion alone (a subset of Southcentral region), anglers spent about $733 million in 2007, which supported 8,056 jobs and generated $55 million in state and local taxes.

INTERIOR (REGION III)

Among anglers, the northern two-thirds of the state could be called the road less traveled. This vast area contains many small communities and sport fisheries located off the road system with fisheries less accessible than places farther south in the state. However, the fishing is none the less exceptional, and in addition to salmon and trout there are fisheries for unique species such as sheefish, arctic char, and burbot, as well as huge northern pike found in the "flats" region of the lower Yukon River.

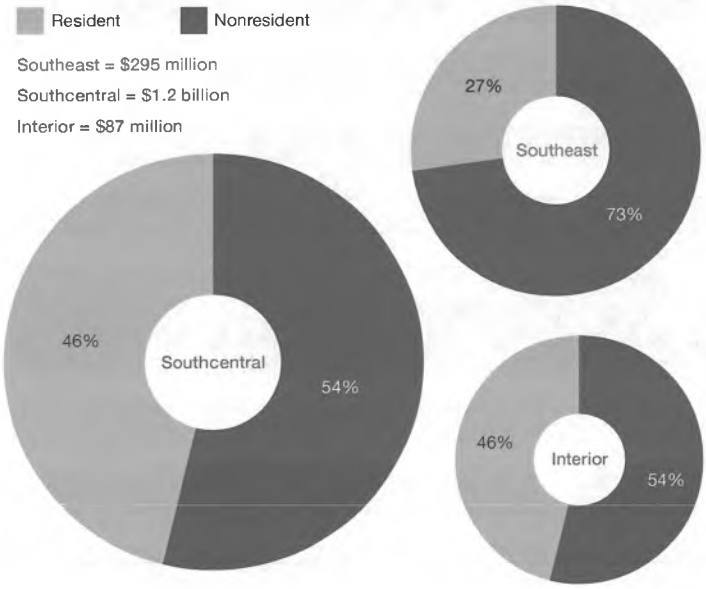
Angling traffic here is lighter than in other regions of the state but still significant. Total regional spending by all anglers in this region topped $101 million in 2007 and directly or indirectly supported 923 area jobs and $7 million in state and local taxes.



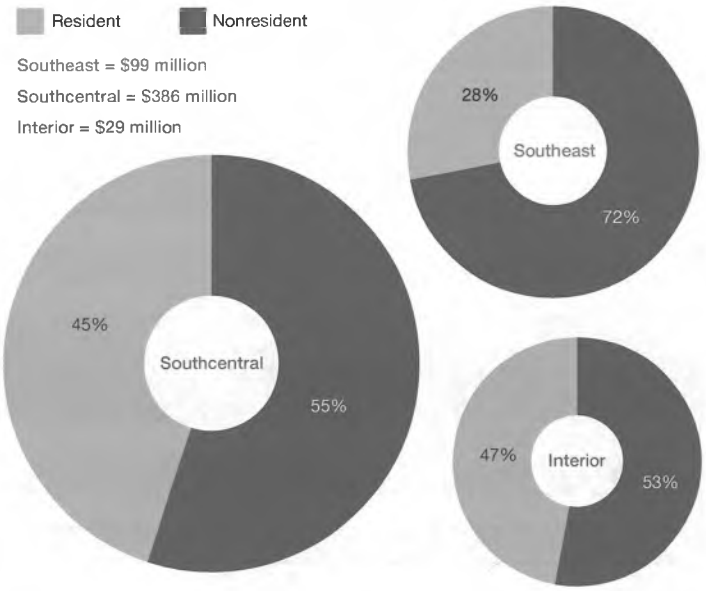
Total Angler Expenditures

$1.4 Billion

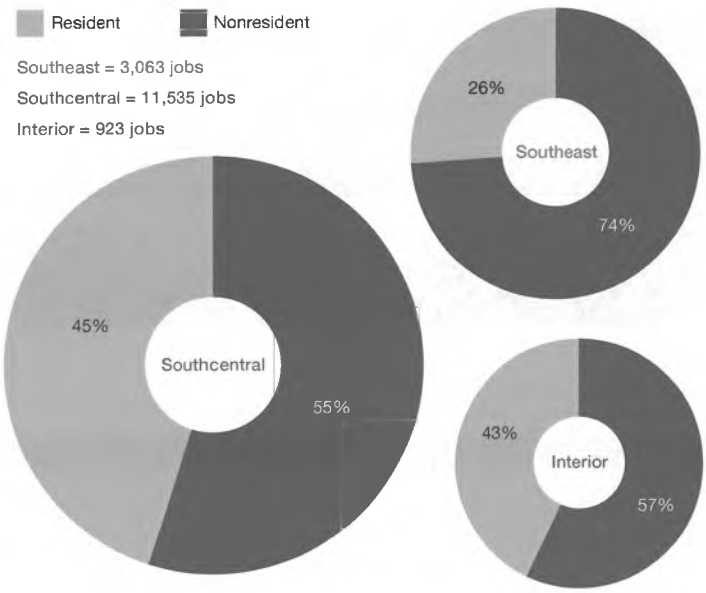
RESIDENT AND NONRESIDENT OUTPUT BY REGION



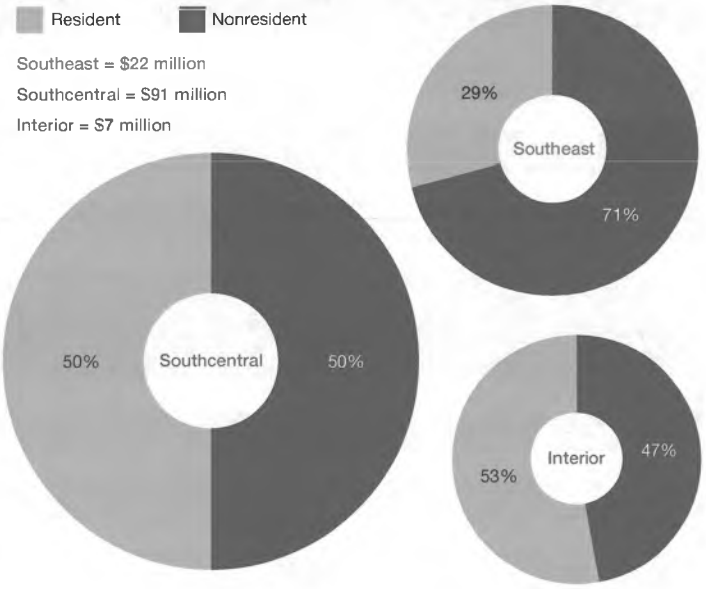
RESIDENT AND NONRESIDENT INCOME BY REGION



RESIDENT AND NONRESIDENT EMPLOYMENT BY REGION



RESIDENT AND NONRESIDENT STATE & LOCAL TAX REVENUES BY REGION



Sportfishing-related Jobs

15,879

Economic measures reported in these charts are based on regional IMPLAN model outputs using 2007 angler expenditures.

See page 11 for definitions of terms used on this page.

Economic Contributions of Sportfishing in Alaska, by Residency & Region, 2007

	Resident Anglers	Nonresident Anglers	All Anglers
ALASKA - STATEWIDE RESULTS			
Anglers' expenditures	$733,289,349	$652,498,723	$1,385,788,072
Output	$668,729,829	$938,863,856	$1,607,593,685
Income	$223,373,937	$321,882,151	$545,256,088
Jobs	6,442	9,437	15,879
Tax Revenues	$107,433,533	$138,881,701	$246,315,114
Local & State	*$56,509,573*	*$66,632,831*	*$123,142,404*
Federal	*$50,923,959*	*$72,248,870*	*$123,172,709*
SOUTHEAST REGION			
Anglers' expenditures	$98,613,993	$174,890,811	$273,504,804
Output	$79,385,025	$215,874,985	$295,260,010
Income	$27,316,008	$71,825,686	$99,141,694
Jobs	791	2,273	3,063
Tax Revenues	$12,227,368	$31,368,564	$43,595,932
Local & State	*$6,376,236*	*$15,686,783*	*$22,063,019*
Federal	*$5,851,132*	*$15,681,782*	*$21,532,913*
SOUTHCENTRAL REGION			
Anglers' expenditures	$560,955,071	$427,603,048	$988,558,119
Output	$534,838,006	$630,707,507	$1,165,545,513
Income	$174,829,996	$211,633,737	$386,463,733
Jobs	5,170	6,365	11,535
Tax Revenues	$86,563,199	$93,692,068	$180,255,267
Local & State	*$45,612,530*	*$45,187,101*	*$90,799,631*
Federal	*$40,950,668*	*$48,504,967*	*$89,455,636*
INTERIOR REGION			
Anglers' expenditures	$67,092,727	$33,467,910	$100,560,637
Output	$40,133,830	$46,578,879	$86,712,709
Income	$13,263,706	$15,300,176	$28,563,882
Jobs	399	524	923
Tax Revenues	$6,710,270	$6,708,875	$13,419,146
Local & State	*$3,825,310*	*$3,396,831*	*$7,222,141*
Federal	*$2,884,961*	*$3,312,044*	*$6,197,005*

Output = total economic activity generated by angler spending
Income = salaries, wages, employee benefits and proprietors' profits stimulated by anglers
Jobs = same as employment, these are the total number of both full-time and part-time jobs supported by angler spending
Tax Revenues = the total personal and business tax revenues earned by local, state, and federal government that are generated by angler spending

Economic Contributions of Sportfishing for Specific Subregions, 2007

	Resident Anglers	Nonresident Anglers	All Anglers
COOK INLET (A SUBREGION OF THE SOUTHCENTRAL REGION)			
Anglers' expenditures	$457,938,464	$275,030,511	$732,968,975
Output	$413,287,612	$414,602,226	$827,889,838
Income	$136,650,136	$142,124,416	$278,774,552
Employment	4,010	4,046	8,056
Tax Revenues	$67,097,024	$44,445,496	$111,542,520
Local & State	*$35,189,444*	*$20,091,926*	*$55,281,369*
Federal	*$31,907,580*	*$24,353,570*	*$56,261,150*
SOUTHEAST REGION - MARINE FISHING ONLY†			
Anglers' expenditures	$21,268,271	$110,345,177	$131,613,448
Output	$28,244,412	$138,794,141	$167,038,552
Income	$9,132,220	$44,692,671	$53,824,891
Employment	301	1,595	1,897
Tax Revenues	$4,791,024	$21,577,534	$26,368,559
Local & State	*$2,713,584*	*$11,473,357*	*$14,186,941*
Federal	*$2,077,440*	*$10,104,178*	*$12,181,618*

Output = total economic activity generated by angler spending
Income = salaries, wages, employee benefits and proprietors' profits stimulated by anglers
Jobs = same as employment, these are the total number of both full-time and part-time jobs supported by angler spending
Tax Revenues = the total personal and business tax revenues earned by local, state, and federal government that are generated by angler spending
†The contributions are for trip spending only, including travel packages. It was not possible to allocate equipment and real estate expenditures by type of water fished.

Definitions of Terms Used in this Report

Angler Expenditures: the dollars spent for the primary reason of sportfishing. Such expenditures include trip-related expenses for fishing (fuel, guide services, lodging, etc.), fishing tackle and other fishing equipment, the portion of ancillary equipment used for fishing that may have multiple uses (e.g., coolers, binoculars), and real estate maintenance and construction expenditures if used primarily for the pursuit of sportfishing.

Total Multiplier Effect (also known as Total Economic Activity): the results (measured in output, income, jobs and taxes) of the total rounds of business and consumer spending stimulated by anglers' original expenditures.

Income: generated as a result of anglers' expenditures, this includes total payroll, including salaries and wages, as well as benefits such as insurance, and retirement benefits paid to employees and business proprietors.

Employment: the total number of both full-time and part-time jobs supported as a result of anglers' expenditures.

Tax Revenues: the total tax revenues earned by local, state and federal governments as a result of anglers' expenditures. All forms of local, state and federal taxes are included.

ACKNOWLEDGEMENTS

Funding for this study was provided by the Alaska Legislature which approved a $229,800 Fish and Game Fund increment and a $200,000 General Fund increment to the Division of Sport Fish FY-2008 budget. The Division of Sport Fish would like to thank Southwick Associates for their dedicated work on this project as well as the many anglers and guide businesses who participated in this study by providing detailed information on their sportfishing-related expenditures in 2007.

Southwick Associates, based in Fernandina Beach, FL, was founded in 1989 to serve state fish and wildlife agencies and the sportfishing and hunting industries. From our north Florida offices, we continue to serve this core group, and now provide economic and business intelligence to many more.

SOUTHWICK ASSOCIATES
FISH AND WILDLIFE ECONOMICS AND STATISTICS

Citation: Economic Impacts and Contributions of Sportfishing in Alaska, Summary Report 2007. Alaska Department of Fish and Game, Division of Sport Fish. January, 2009. Anchorage, Alaska.

For more information, contact Bill Romberg, Alaska Department of Fish and Game, (907) 267-2366 or william.romberg@alaska.gov.

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For information on alternative formats and questions on this publication, please contact:
ADF&G Division of Sport Fish, Research and Technical Services, 333 Raspberry Road, Anchorage AK 99518 (907) 267-2375.

Transition Team Topics: Better Integration of Business Intelligence

KENAI RIVER SPORTFISHING

Professional Sportfishing Guide Services Board

- Assure Alaska's guided sport industry competes favorably with other world class destinations
- Diligent oversight for sport fishing services industry – like any prudent investments
- Benefits of Industry Recognition & Regulation
- Logbook program – permanent, vital tool

UNITED FISHERMEN OF ALASKA

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Juneau, Alaska 99801-1172
(907) 586-2820
(907) 463-2545 Fax
E-Mail: ufa@ufa-fish.org
www.ufa-fish.org

February 24, 2011

Representative Steve Thompson, Chairman
House Special Committee on Fisheries
Alaska State Legislature
State Capitol, 120 Fourth Street
Juneau, AK 99801-1182

RE: Support for HB 173 - An Act amending the termination date of the licensing of sport fishing operators and sport fishing guides; and providing for an effective date.

Dear Chairman Thompson and Committee Members,

UFA supports HB 173, which would extend the sunset date on the sport guide and vessel licensing program from January 1, 2012 to January 1, 2013. It is essential for the Department of Fish and Game to have a system of registration and communication with operators of fishing guide businesses to be able to measure activity and harvest for effective fisheries management. Without passage of HB 173, the registration and logbook program that is in place will not continue beyond the current year. Without such a system to accomplish the objectives regarding recreational fisheries in the Magnuson-Stevens Fishery Conservation and Management Act of 2005, it is our belief that the State of Alaska would be in jeopardy of losing management jurisdiction over marine fisheries to the federal government.

United Fishermen of Alaska is the largest statewide commercial fishing trade association, representing 38 commercial fishing organizations participating in fisheries throughout the state and its offshore waters.

Sincerely,

Mark Vinsel
Executive Director

HOUSE COMMITTEE REPO!

(7)
Date Referred to Committee: February 25, 2011 **FURTHER REFERRALS: Resources**

Date of Committee Action: 3/8/11

The HOUSE SPECIAL COMMITTEE ON FISHERIES considered: **HB 173**

HOUSE BILL NO. 173
"An Act amending the termination date of the licensing of sport fishing operators and sport fishing guides; and providing for an effective date."

HB 173-SPORT FISHING GUIDING SERVICES

Recommends it be replaced with [ ] HCS *or* **[ ] CS** *for* _____( )
For Senate Bills with new title: [ ] Technical Title [ ] New Title: HCR_____ [ ] Same Title [ ] New Title

[ ] attach amendments
[ ] add new referral to _____Committee
[ ] Letter of Intent_____Committee

List of Abbrev for Depts.:
ADM
CED
COR
CRT
EED
DEC
DFG
GOV
DHS
LWF
LAW
LEG
MVA
DNR
DPS
REV
DOT
UA

***NEW* FISCAL NOTES**
*FN# is assigned by Chief Clerk's Office

*FN#	List by Dept(s):	Fiscal	Indet.	Zero
	DFG	✓		

***PREVIOUS* FISCAL NOTES**

FN#	List by Dept(s):	Fiscal	Indet.	Zero

Signing with recommendations	Printed Last Name	DP	DNP	NR	AM
Robert J. Miller	MILLER			X	
	Pruitt			X	
Austerman	Austerman	X			
Chair: Stan M Thompson	Thompson	X			
Chair:					

HB

181

<TARGET><BILL>HB 181</BILL><SUBJECT>HB
181</SUBJECT><COMM>HFSH27</COMM></TARGET>

27-LS0292\E
Kane
3/22/11

CS FOR HOUSE BILL NO. 181(FSH)

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-SEVENTH LEGISLATURE - FIRST SESSION

BY THE HOUSE SPECIAL COMMITTEE ON FISHERIES

Offered:
Referred:

Sponsor(s): REPRESENTATIVES AUSTERMAN, Kawasaki

A BILL

FOR AN ACT ENTITLED

"An Act requiring the Department of Fish and Game annually to collect confidential information related to days worked by commercial fishing crewmembers and to compile statistical data."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* **Section 1.** AS 16.05 is amended by adding a new section to read:

Sec. 16.05.465. Commercial fishing crewmember activity form and data. (a) For the purpose of creating and publishing annual statistics, the department shall establish a system for the collection, processing, and publication of information related to the number of days obligated to a vessel or set net site by crewmembers who are employed in fisheries in the state.

(b) The department shall produce a crew activity form in which a crewmember shall record the following information regarding employment:

(1) the crewmember's full name and home address;

(2) the crewmember's license number or Alaska Commercial Fisheries

Entry Commission landing card used in lieu of a crew license;

(3) the start date and end date for the period that the crewmember was obligated to a vessel or set net site;

(4) the fishery in which the crewmember worked while employed on the vessel or set net site, including the area of the state and gear type; and

(5) other information the department finds necessary.

(c) Information recorded on a crew activity form collected by the department under this section is confidential, except as provided in (e) and (f) of this section.

(d) The department shall annually, before April 15, collect from crewmembers as many completed or partially completed crew activity forms for the preceding calendar year as is reasonably practicable.

(e) The department

(1) shall provide each fishing vessel or set net site operator and fishing vessel or set net site owner the opportunity to review and contest the information recorded on a crew activity form collected under (d) of this section; if the department does not receive a crew activity form back from a fishing vessel or set net operator or fishing vessel or set net owner, it is presumed that the information on the crew activity form is not disputed;

(2) may use information recorded on a crew activity form collected under (d) of this section to create statistical data in a manner that preserves the anonymity of the fishing vessel or set net site and the individual crewmember; statistical data created in compliance with this paragraph is not confidential; and

(3) may make information reported on a crew activity form available to the National Marine Fisheries Service, the United States Department of Agriculture, or the United States Department of Labor, as the department considers necessary.

(f) The department shall make the information reported on a crew activity form available to the Department of Labor and Workforce Development for the publication of statistical data gathered.

(g) The department may adopt regulations necessary to implement this section.

(h) In this section,

(1) "crewmember" means an individual who holds or is required to hold a commercial fishing license under AS 16.05.480;

(2) "fishing vessel or set net site operator" means an individual who is responsible by law for the operation of a fishing vessel or set net site;

(3) "obligated to a vessel or set net site" means the days

(A) during which a crewmember is on land and is not landing or taking fish, but is either on call or otherwise performing work for a fishing vessel or set net site; and

(B) during which a crewmember is aboard a fishing vessel or at a set net site for the purpose of commercial fishing.

* **Sec. 2.** AS 16.05.450(e) and 16.05.465 are repealed January 1, 2015.

CS FOR HOUSE BILL NO. 181(FSH)

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-SEVENTH LEGISLATURE - FIRST SESSION

BY THE HOUSE SPECIAL COMMITTEE ON FISHERIES

Offered:
Referred:

Sponsor(s): REPRESENTATIVES AUSTERMAN, Kawasaki

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(B) during which a crewmember is aboard a fishing vessel or at a set net site for the purpose of commercial fishing.

* **Sec. 2.** AS 16.05.450(e) and 16.05.465 are repealed January 1, 2015.

Representative Alan Austerman
House Majority Leader

Alaska State Legislature

Sponsor Statement for House Bill 181: Fishing Crew Data Program

Economists estimate that the Alaska seafood industry is the largest private sector employer in the state. In November 2010, the Alaska Department of Labor reported that the industry employed at least 53,500 workers—skippers, crew and processing workers—at some point during at some point during 2009. This number is a best estimate, though, because commercial fishermen, as self-employed people, are outside of standard labor data collection. At present, data to describe the workforce of 20,000 crew members who work in Alaska's fisheries is almost non-existent. We cannot determine whether an individual crewmember fished 5 days or 250 in a given year; whether he or she fished in a single salmon fishery or in seven fisheries across five regions of the state; on a single boat or on 10; or whether he or she fished a single year as an adventure, or is a 25-year veteran of the industry.

State and federal fishery policy can have strong impacts—positive or negative—on employment in the seafood industry. At present, however, decision makers have extremely limited information that can guide their policy direction with respect to the labor force in the fishing industry. They are asked to formulate resource policies that impact the largest labor force in Alaska, without the benefit of information on that labor force. Time and time again—particularly in federal regulatory arenas—Alaskans have seen regulations implemented that have significant and deleterious impacts on the seafood industry that could have been foreseen, mitigated, or avoided had this information been in hand.

HB181 is the result of five years of work by fishing industry participants, coastal municipalities, and the Alaska Department of Fish and Game to develop a program and approach that addresses the policy needs and interests of Alaskan fishermen and communities. It establishes a pilot crew data program in the Alaska Department of Fish and Game. Simple year end reports from commercial fishing crew will provide information on fishery participation through the course of the year, and allow the department to link crewmember data with harvest data for aggregated statistical analysis.

HB181 has a 5-year sunset. This provides the Legislature the opportunity to review the efficacy of the program and ensure it meets the intended policy goals.

LEGAL SERVICES

DIVISION OF LEGAL AND RESEARCH SERVICES
LEGISLATIVE AFFAIRS AGENCY
STATE OF ALASKA

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FAX (907) 465-2029
Mail Stop 3101

State Capitol
Juneau, Alaska 99801-1182
Deliveries to: 129 6th St., Rm. 329

MEMORANDUM March 15, 2011

SUBJECT: Possible labor issue involved in HB 181
(Work Order No. 27-LS0292\B)

TO: Representative Alan Austerman
Attn: Erin Harrington

FROM: Brian J. Kane BJK
Legislative Counsel

You have asked the following: If this bill passes, would vessel owners be required to later provide compensation for crew for the period in which the crew was "obligated to the vessel" but not actually fishing? If the data shows that a particular crewmember is obligated for a period of months but only fishing for a few weeks, could that crewmember sue the vessel owner for not being compensated for the entire duration for which the crewmember was obligated to the vessel?

I do not believe that HB 181 creates a basis for a crewmember to be owed compensation for time obligated to the vessel or a basis for a crewmember to sue the vessel owner. Simply put, HB 181 merely outlines a procedure for acquiring statistical data regarding commercial fishing in Alaska. In trying to determine the period that you wanted to be counted for the statistical analysis, the phrase "obligated to the vessel" was chosen to describe the time you wanted a crewmember to consider when he or she was filling out the crew activity form. It is not likely that this phrase that is used solely for the purpose of collecting data would create any extra rights to payments for a crewmember.

Per my review, there is nothing in HB 181 that substantively changes the working relationship between a crewmember and a vessel owner. The only thing the bill does is create a system for the Department of Fish and Game to collect data and statistics.

If I may be of further assistance, please advise.

BJK:lmb
11-003.lmb

MEMORANDUM

State of Alaska
Department of Law

TO: Geron Bruce
Assistant Director
Commercial Fisheries Division

DATE: July 24, 2008

FILE NO.: 661-04-212

TEL. NO.: 269-5241

THRU:

SUBJECT: Legal Issues re:
Commercial Fishing Crew
Data Collection

FROM: Lance B. Nelson
Senior Assistant Attorney General
Natural Resources Section, Anchorage

I. Introduction.

At your request, I have reviewed the report "Improving Seafood Harvesting Labor Data Collection in Alaska Fisheries," (report) prepared by Northern Economics, Inc. for Southwest Alaska Municipal Conference in 2007. The various methodologies proposed as potential solutions do not present significant legal hurdles that could not be adequately addressed by legislation. There are no general, significant legal obstacles to legislation that would require reporting of the details of crew member activity by permit holders or crew members themselves. Nor should there be any legal problems in establishing reasonable confidentiality restrictions and disclosure conditions for such data.

II. Potential Issues, Answers, and Options.

A. General Issues.

Legislation is recommended, and probably required, to (1) establish standards for the collection of crew data through reporting requirements or to specifically authorize the Board of Fisheries or the commissioner of ADF&G to adopt such standards by regulation and (2) to address confidentiality requirements for such data. There are currently no statutory requirements for reporting crew activity reports. Nor is there express authority for either the Board of Fisheries or the Commissioner to require such reporting. While there may be an argument to support implied authority regulatory authority to require reporting, clear statutory authority would eliminate confusion and prevent litigation. And since legislation adequately addressing confidentiality and disclosure conditions would likely be required in any event, it makes sense to have specific

statutory authority requirements for reporting as well.

The Legislature clearly has the authority to require reporting of activities related to the harvest of a public resource. The harvest activities of crew members on commercial fishing vessels would be a proper and legal subject of reporting requirements.

The Legislature has very broad discretion to determine confidentiality requirements and disclosure conditions for commercial fishery harvest data. Alaska's commercial fishermen harvest a publicly-owned resource. There is probably no general constitutional or common law right to keep individual data on the commercial harvest of a public fishery resource confidential. The legislature has chosen, however, to classify certain harvest data received by the state as confidential and subject to disclosure only under specified conditions. AS 16.05.815. The legislature can generally tighten or loosen confidentiality requirements or disclosure conditions at its discretion.

For example, the legislature could establish a system for the disclosure of harvest data to crew members as well as permit holders for the time periods when the crew member is reported to be aboard the vessel. Any objection to that kind of system would be a political one, not a legal one. Or the legislature could make no allowance for a crew member's access to the harvest data, as it currently makes no allowance for vessel owners.

The access question becomes more complicated, however, when the information collected by the state may be intended for use as evidence to adjudicate an individual's right to participate in a fishery or receive some kind of fishery quota. In that case, due process considerations may require that the individual have some mechanism to access the raw data used by the state to determine the individual's qualifications to verify the accuracy of that data.

B. Specific Questions Raised in the Report.

On page nine of the executive summary of the report and page 55 of the body of the report, the following questions are raised:

> The key question is whether including crew identifiers and other information on fish tickets and/or eLandings would necessarily give crew legal access to information on the fish tickets and, if so, to what information. This question will have to be answered by legal counsel and may require a court decision in the long run. If crewmember data are treated in the same manner as vessel owner data, crewmembers will not automatically have access to harvest and price information included on fish tickets. However if crewmembers are treated like permit holders, they would have access to harvest and value data that they are currently not able to access. Thus there are important unanswered questions regarding the use of fish tickets to record crew data:

- Will crew be able to access fish ticket data beyond their own participation?
- What is the functional effect of allowing access to more than just participation data?
- Is potential access by crewmembers to more than participation data a political obstacle that would stop forward progress in developing any new system of data collection?

These questions can be answered as follows:

- Including crew identifiers on fish tickets and/or eLandings would not automatically mean that crew members are entitled to access to information on fish tickets; that would be up to the legislature to specify in statute,[1] but giving a person access to records of that person's own activity when qualification for some kind of future quota or limited opportunity is at stake is likely to be given serious consideration by the legislature, and may be required by due process standards. Until the legislature adopts such a quota or limited opportunity program, however, due process considerations would probably not come into play.

- Whether crew members will be able to access data beyond their own participation will depend on the statutory language enacted by the legislature. Unless the additional data becomes relevant to potential quota or limited opportunity adjudications, it would be difficult to justify that kind of access as a public policy matter.

- The functional effect of allowing more than participation is a policy question, not a legal one.

- The question of additional access being a political obstacle is not a legal question.

C. Other Legal Issues Found in Report.

1. Limitations on eligibility for future crew quota shares.

On pages 38 and 43 of the Report, there is a suggested option identified as "Option 1.5 Create a New 'Professional Crew' License. The creation of a professional crew license itself would not present legal issues, but the proposed incentive to encourage voluntary applications for "professional crew licenses," namely limitations on eligibility for potential future crew quota

1 Currently, AS 16.05.815(a)(6) provides that the department or CFEC may release "on request, the report of a person to the person whose fishing activity is the subject of the report, or to a designee of the person whose fishing activity is the subject of the report." So a crewman would likely be deemed to have access to any information that reported his fishing activity. But the legislature could restrict such access if it chose to.

shares, would probably be unconstitutional. These limitations would likely be ruled inconsistent with the equal access provisions of the Alaska Constitution because the restrictions placed on entry into a fishery would be related to administrative requirements rather than a person's relationship to a fishery resource.[2] Conditions on qualifications for future individual allocations would likely have to be based on factors more directly related to direct dependence on, and participation in, the fishery to be consistent with the Alaska Constitution.

Also, laws or regulations cannot bind future legislatures, boards, or commissioners, so the legislature could choose to ignore the restrictions on the ability to qualify for future quota programs when it finally gets around to enacting such a program.

2. Use of unemployment or federal income tax information.

On pages 48-49 of the report, there is a discussion about the possible use of the reporting system of utilized by the Alaska Department of Labor and Workforce Development to collect wage and salary employment and earnings, referred to as ES-202 forms. By law, vessel operators and crewmen are exempt from these reporting requirements. AS 23.20.526(a)(17), so there is no current reporting on ES-202 forms for crew activity, and crew income does not fit the reporting format for wage earners or salaried employees. But the legislature could enact a reporting program similar in general form to the ES-202 reports, although the wage or salary information would obviously need to be transformed to an income basis for fishermen. Enactment of such a program would not require compliance with minimum wage and unemployment insurance laws for vessel operators or crew.

On pages 49-50 of the report, there is also a discussion about the use of federal Internal Revenue Service forms to gather crew member data. We believe it is possible for a state to require by statute the filing of a copy of IRS forms, as is the case in states with state income taxes. In the alternative, the legislature could certainly require the filing of separate forms that have the same data provided in the IRS forms.

III. Conclusion.

In summary, there should be no significant legal obstacle to developing an effective system of crew data collection. Statutory changes will likely be required, but the legislature has wide discretion to fashion reasonable reporting requirements and confidentiality protections.

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2 Section 17 of article VIII of the Alaska Constitution provides:

> Laws and regulations governing the use or disposal of natural resources shall apply equally to all persons similarly situated with reference to the subject matter and purpose to be served by the law or regulation.

UNITED FISHERMEN OF ALASKA

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March 15, 2011

Representative Steve Thompson, Chairman
House Special Committee on Fisheries
Alaska State Legislature
State Capitol, 120 Fourth Street
Juneau, AK 99801-1182

Dear Chairman Thompson and Committee Members,

United Fishermen of Alaska supports HB 181 regarding commercial fishing crew data.

UFA recognizes the importance of timely and accurate economic data on the economic contributions of commercial fishing. We recognize the current limitations on data regarding the significant contributions to Alaska's economy through the earnings and residency of crew members. Without this information, policy makers may not be aware of the positive economic contributions that extend far beyond our coastal communities.

UFA has actively supported the development of a program within the Department of Fish and Game to develop timely and accurate data on commercial fishing crew participation in fisheries. In the previous discussions on this, we supported a crew-generated logbook program, with an opportunity for skippers to verify these at the end of the season, and we applaud the sponsor of HB 181 for including this. We also support the need for confidentiality of an individual's earnings that HB 181 provides.

United Fishermen of Alaska represents 38 Alaska Commercial fishing organizations, and hundreds of individual fishermen and related businesses. We support HB 181 and thank you for your attention to this matter.

Sincerely,

Mark Vinsel
Executive Director

Questions for HB181 in Fisheries Committee—5pm March 15th.

1. Is there any way to enforce the collection/reporting of this data?

2. How accurate would the data be that is collected through this program
    a. Do you think there would be any difference between the quality of data for residents and the quality of data for non-residents?
    b. Are there other ways to ask for this data that would make it more accurate?

3. Why not collect this data from skippers rather than from crew?
    a. Would this be an undue burden on skippers?
    b. Would it significantly increase the quality of the data?

4. Would this data be valuable to the department as they develop their policy approaches for the North Pacific Fishery Management Council arena?

5. Could data about crew participation be collected at the point of sale, on a fish ticket?
    a. Would this data be inherently more valid than data collected through year-end reporting?
    b. It seems that the quality of data, in a point-of-sale approach, might be more valid as a whole, but suffer problems in particular fisheries. Which fisheries might have the greatest difficulty with point-of-sale reporting?

6. Should vessel owners as well as skippers have the opportunity to review data? Example, a scenario where a hired skipper runs a trawler out of Kodiak, but the vessel is owned by someone else.

7. If the data show that a particular crew member is "obligated" for a period of months, but only fishing for a few weeks, would that allow crewmembers to sue their skippers for not being compensated for the entire duration they were "obligated to the vessel?"

8. How will we account for crew who use a fisheries landing card or limited entry permit as their license?

Representative Alan Austerman

House Majority Leader

Alaska State Legislature

MEMORANDUM

To: Representative Steve Thompson, Chairman
House Fisheries Committee

From: Representative Alan Austerman

Date: March 24, 2011

RE: Changes to House Bill 181 from Version B to Version E

The following changes have been implemented into House Bill Version E, based on feedback from industry, the Alaska Department of Fish and Game (ADF&G), Commercial Fisheries Entry Commission (CFEC), and committee members. Except where noted, page and line numbers refer to the draft committee substitute, Version E.

- **Deletion of Section 1 from Version B**—Section 1 in Version B directed ADF&G to issue crew activity forms to crewmembers at the time when crew licenses are purchased. The department instead envisions mailing forms to crewmembers at the end of the season. Section 1 was deleted to allow the department the flexibility to design the best possible distribution system for crewmember activity forms.
- **Throughout the bill**—where the term "vessel" was previously used, it has been expanded to include vessels and set net sites. This is because fishing activity at set net sites does not necessarily occur on board a vessel.
- **Page 1, Line 14 to Page 2, Line 6**—The data that crewmembers will be mandated to report has been changed somewhat, following additional conversations with ADF&G and CFEC. An important goal of the data collection is to link the crew database with existing harvest and databases, in order to tie crew to fishing activity. We recognize that doing this successful may require some amount of experimentation in program design. We have provided flexibility so the department can design a successful program without the need to return for legislation. Additionally, on Page 2, Line 14 and Page 3, Line 2, we have specified some information that the agencies feel will be critical.
- **Page 2, Line 9**—The reporting date has been changed to April 15, as it is envisioned that crewmembers may choose to complete their annual crew activity forms at the same time they prepare their federal income taxes.

- **Page 2, Lines 13 and 14**—We have provided the opportunity for vessel and set net site owners as well as operators to review the data. This is because hired skippers sometimes operate vessel or sites.
- **Page 2, Line 25**—The United States Department of Labor was added to the list of federal agencies with which ADF&G can share data. This is because the U.S. Department of Labor administers the Trade Adjustment Assistance program, which has been applied to harvesters in Alaska several times in the last decade.
- **Page 3, Line 11**—The sunset date was advanced by one year. This ensures at least three years of complete data, but brings the program back before the legislature on a quicker timeline to ensure the program is effective.

Representative Alan Austerman
House Majority Leader

Alaska State Legislature

Sponsor Statement for House Bill 181: Fishing Crew Data Program

Economists estimate that the Alaska seafood industry is the largest private sector employer in the state. In November 2010, the Alaska Department of Labor reported that the industry employed at least 53,500 workers—skippers, crew and processing workers—at some point during at some point during 2009. This number is a best estimate, though, because commercial fishermen, as self-employed people, are outside of standard labor data collection. At present, data to describe the workforce of 20,000 crew members who work in Alaska's fisheries is almost non-existent. We cannot determine whether an individual crewmember fished 5 days or 250 in a given year; whether he or she fished in a single salmon fishery or in seven fisheries across five regions of the state; on a single boat or on 10; or whether he or she fished a single year as an adventure, or is a 25-year veteran of the industry.

State and federal fishery policy can have strong impacts—positive or negative—on employment in the seafood industry. At present, however, decision makers have extremely limited information that can guide their policy direction with respect to the labor force in the fishing industry. They are asked to formulate resource policies that impact the largest labor force in Alaska, without the benefit of information on that labor force. Time and time again—particularly in federal regulatory arenas—Alaskans have seen regulations implemented that have significant and deleterious impacts on the seafood industry that could have been foreseen, mitigated, or avoided had this information been in hand.

HB181 is the result of five years of work by fishing industry participants, coastal municipalities, and the Alaska Department of Fish and Game to develop a program and approach that addresses the policy needs and interests of Alaskan fishermen and communities. It establishes a pilot crew data program in the Alaska Department of Fish and Game. Simple year end reports from commercial fishing crew will provide information on fishery participation through the course of the year, and allow the department to link crewmember data with harvest data for aggregated statistical analysis.

HB181 has a 5-year sunset. This provides the Legislature the opportunity to review the efficacy of the program and ensure it meets the intended policy goals.

FISCAL NOTE

STATE OF ALASKA
2011 LEGISLATIVE SESSION

Fiscal Note Number
Bill Version **HB 181 / B**
() Publish Date

Identifier (file name) HB181-DFG-CFD-03-11-11
Title Commercial Fishing Crewmember Statistics
Sponsor Representative Austerman, Kawasaki
Requester House Fisheries Committee

Dept. Affected Fish and Game
Appropriation Commercial Fisheries
Allocation Headquarters Fish Management
OMB Component Number 2171

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information					
OPERATING EXPENDITURES	**FY 2012**	**FY 2012**	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**
Personal Services	229.8	229.8	229.8	229.8	229.8	229.8	229.8
Travel	8.0	8.0	4.0	2.0	2.0	2.0	2.0
Services	28.0	28.0	14.8	15.5	15.2	15.6	15.6
Commodities	29.0	29.0	29.0	29.0	29.0	29.0	29.0
Capital Outlay							
Grants							
Miscellaneous							
TOTAL OPERATING	**294.8**	**294.8**	**277.6**	**276.3**	**276.0**	**276.4**	**276.4**
CAPITAL EXPENDITURES							
CHANGE IN REVENUES							

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts							
1003 GF Match							
1004 GF	294.8	294.8	277.6	276.3	276.0	276.4	276.4
1005 GF/Program Receipts							
1037 GF/Mental Health							
Other (please identify)							
TOTAL	**294.8**	**294.8**	**277.6**	**276.3**	**276.0**	**276.4**	**276.4**

Estimate of any current year (FY2011) cost

POSITIONS

Full-time	2	2	2	2	2	2	2
Part-time	1	1	1	1	1	1	1
Temporary							

Why this fiscal note differs from previous version (if initial version, please note as such)

Initial version of bill.

Prepared by Geron Bruce, Assistant Director
Division Commercial Fisheries
Approved by Kevin Brooks, Director
Administrative Services

Phone 465-6151
Date/Time 3/11/11 2 00 PM
Date 3/11/2011

Revised 1/20/2011 OMB

FISCAL NOTE

STATE OF ALASKA
2011 LEGISLATIVE SESSION

BILL NO. HB 181 / B

Analysis

This legislation would require ADF&G to develop a paper logbook data collection and electronic database system. These systems would be used to collect information and produce reports that would describe the commercial fishing activities of crew members working in Alaska's commercial fisheries; information which is not currently available. The most recent 5 year average of the number of crew member licenses sold is 20,600.

Establishing a new crew member fishing data collection system will require distributing and collecting log books from all individuals who bought crew member licenses annually, as well as providing and collecting information from vessel owners to verify crew data. Once collected, the information from the log books will be entered into an electronic data base for storage, analysis, and reporting. The original, returned logbooks will be archived. Crew data would be sent to vessel owners for verification. In order to associate crew member data with landings from specific vessels, crew member data will be merged with harvest data collected by the Alaska Department of Fish and Game, and permit and vessel data maintained by the Commercial Fisheries Entry Commission.

ADF&G has identified that accomplishing this work will require a Program Coordinator II, who will serve as the overall program manager who will be responsible for data quality, analysis, reporting, outreach and training, user support, administration of confidentiality and other duties. An Analyst Programmer IV will be required to work with a contractor in the development and implementation of a database system and to maintain and support the database once it becomes operational. Six months of an Office Assistant II will be required to mail and data enter the 20,000 logbooks and approximately 10,000 vessel operator forms.

New staff: (includes salary and benefits)
Full-Time Program Coordinator II (Range 20, Step A $100,104)
Full-Time Analyst Programmer IV (Range 20, Step A $100,104)
Part-Time Office Assistant II (Range 10, Step A $29,588)

Travel:
Travel for outreach by the ADFG program coordinator

Services:
Postage (outgoing and pre-paid) and other mailing expenses.
Software support and maintenance of software contracts
Network and IT infrastructure support

Commodities:
Printing of paper logbooks and communications/training materials

UNITED SOUTHEAST ALASKA
GILLNETTERS
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March 23, 2011

Representative Alan Austerman, Majority Leader
Alaska House of Representatives
State Capitol
Juneau, AK 99802

RE: CS HB 181(Fish)

Rep. Austerman,

United Southeast Alaska Gillnetters (USAG) supports CS for House Bill 181(Fish). We believe the bill will allow for basic data collection on a segment of the fishing industry that has been difficult to ascertain. All industries in the state should be accounted for when compiling basic data for labor and workforce analysis. The information collected on crew members will help in compiling complete economic and job activity in the state, which ultimately helps in securing federal funding for important work activity programs.

In fishing industry, commercial fisheries have become rationalized, (controlled harvests and controlled participation) and the data gathered under CSHB 181 allows for crew information to finally be collected appropriately. The information will be very useful as the remaining un-rationalized fisheries become rationalized. Having complete crew information helps regulators gain a complete circle of participation, which will ultimately provide for fair distribution of resources when divvying up catch-share plans and access permits.

USAG also supports the inclusion of limited-entry permits as another form of a crew license. Many fishermen, who hold limited entry permits, often work as crew in another fishery and on another vessel. We appreciate the simplicity of HB 181. For many years, multiple options for collecting crew data have been explored; however the options always placed the impetus on the owner to provide the information. HB 181 makes the process easy and un-burdensome by simply sending the crewmembers a form to fill out and send to the department. Further simplification, might be to remove section (e), which grants the owner the option to contest the crewmember data. This removal of section (e) will cut the fiscal note and can be factored with simple statistical analysis formula.

Again, we appreciate the introduction of HB 181, and we are hopeful this bill will move quickly through the legislative process.

Best Regards,

Chris Knight

Chris Knight, Executive Director
USAG

Crew Data Collection Requirements and Feasibility Results

Alaska Department of Fish and Game

And

Wostmann & Associates, Inc.



WOSTMANN & ASSOCIATES, INC.

System Options Studied

Project definition specified 3 options to study

- Landing Report Capture
- Vessel Operator Report
- Logbook

Information and Requirements Gathering

- Structured Interviews
  - Data Consumers – users of the data
  - Data Providers – Vessel operators and crew members
  - Data Reporters – seafood processors
  - Enforcement
- Team meetings
  - System Administrators
    - » CFEC Permit Licensing system
    - » ADF&G Licensing system
    - » eLandings system
    - » ADF&G Commercial Fisheries IT
- 91 individuals provided input

Requirements Definition

- Gathered information needs, capabilities, and constraints
- Determined interfacing system requirements and constraints
- Created Requirements definition documents using IEEE/ANSI Standard for Software Requirements Specification
- Received feedback from agency staff and reviewers, and incorporated into documents

Estimated Development Costs

- Analysis team members made independent development estimates based on requirements documents
- Analysis team applied estimates to system components and subsystems



Estimated Operational Costs

- Developed operational cost estimates for each system option
- Estimating factors:
  - Transaction volumes for each system option
  - Number of users for each system option
  - Current system support experience of eLandings system
  - Infrastructure needed
  - Data verification efforts on existing eLandings system
  - Unique system option features

Feasibility Assessment
Significant Challenges

- Crew License Number validation
- Reporting compliance
- Reporting Accuracy
- Data Reporter Interests

Feasibility Challenges
Landing Report Capture

- Least development costs, but highest support costs, highest transaction rate
- Most subject to crew license validation issue due to real time nature of data capture
- Subject to systemic non-compliance in some fast paced fisheries
- Greatest data entry burden
- Involves extra class of users

Feasibility Challenges
Vessel Operator Report

- High development costs
- Relatively high support costs
- New infrastructure required for IVR
  - IVR not popular with users
  - IVR complexity exceeds rules of thumb
- Crew license validation still an issue
- Prompting for reporting required

Feasibility Challenges
Logbook

- High development costs
- Support costs lower due to shortened reporting period and lower number of transactions
- Crew license validation issue mitigated
- Paper logbook required
- Prompting for reporting required

Conclusions

- Significant risk in all options
  - Higher than for similar sized systems
  - Data quality, user acceptance, support
- Data quality a significant issue
  - Ability to validate crew license numbers a major drawback on two of the options
  - Verification of data may require significant effort
  - Crew review input uncertain

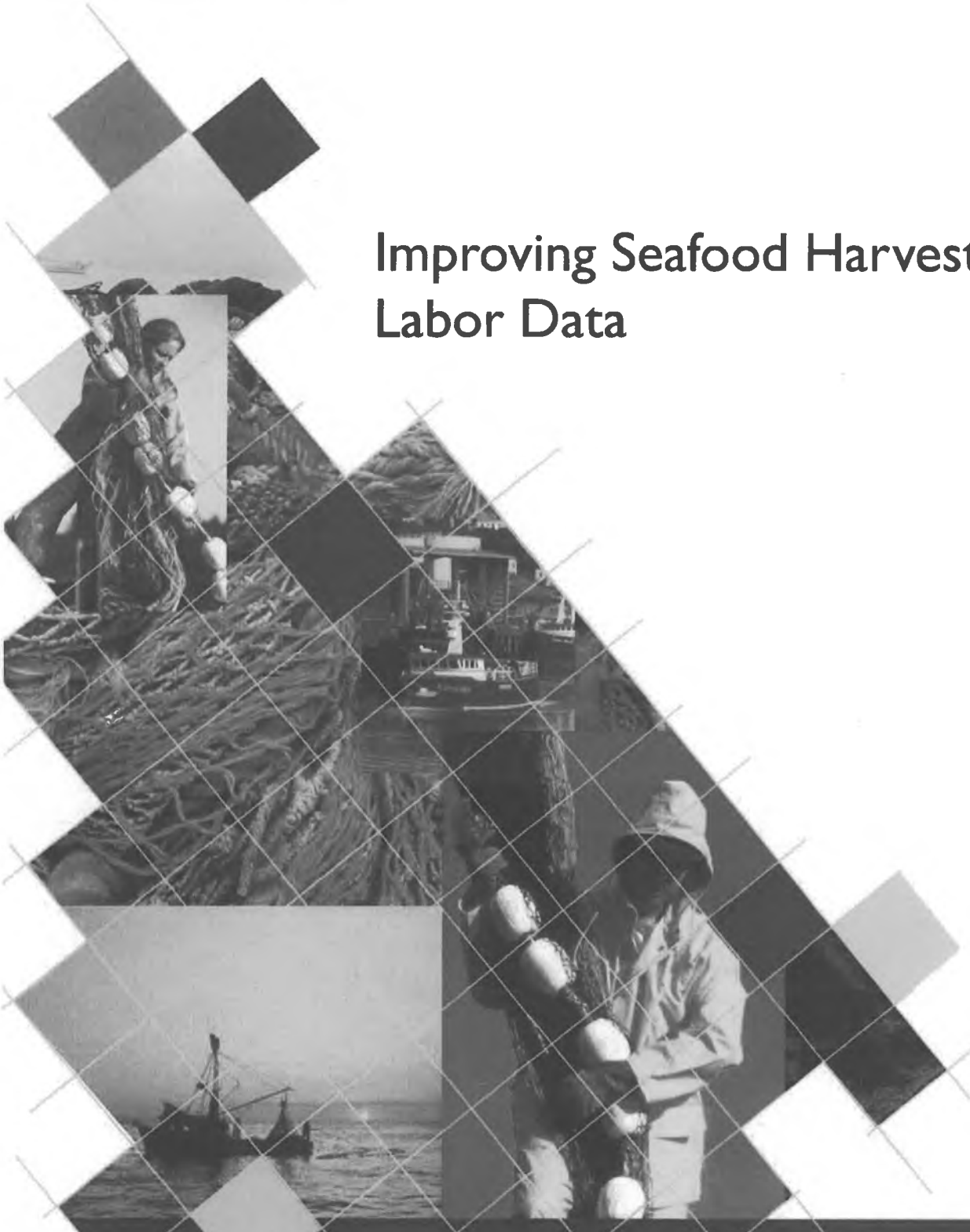
Recommendations

- Go forward cautiously
- Of the studied options:
  - **Logbook**
  - Consider piloting with paper logbook only to reduce development costs
- Consider other options, implement experimentally as proof of concept

Questions/Comments?



Improving Seafood Harvesting Labor Data



northerneconomics inc.

In association with

Jon Isaacs, URS Alaska Operations
Gunnar Knapp, Institute for Social and Economic Research, University of Alaska Anchorage

Prepared for

Southwest Alaska Municipal Conference

March 2007

Improving Seafood Harvesting Labor Data Collection in Alaska Fisheries

Prepared for the

Southwest Alaska Municipal Conference

March 2007

Prepared by



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Abbreviations

ADCCED	Alaska Department of Community, Commerce, and Economic Development
ADF&G	Alaska Department of Fish and Game
ADOLWD	Alaska Department of Labor and Work Force Development
BEA	Bureau of Economic Analysis
BLS	Bureau of Labor Statistics
BSAI	Bering Sea Aleutian Islands
CDQ	Community Development Quota
CFEC	Commercial Fisheries Entry Commission
DCPL	Daily Cumulative Production Logbook
DFL	Daily Fishing Logbook
EEZ	Exclusive Economic Zone
EDR	Economic Data Report
ER	Electronic Reporting
FT	Fish Ticket
FTE	Full Time Equivalent
IERS	Inter-agency Electronic Reporting System
IFQ	Individual Fishing Quota
IPHC	International Pacific Halibut Commission
LOA	Length Overall
NIOSH	National Institutes for Occupational Health and Safety
NMFS	National Marine Fisheries Service (NOAA Fisheries)
NOAA	National Oceanic and Atmospheric Administration
PSMFC	Pacific States Marine Fisheries Commission
SSN	Social Security Number
SWAMC	Southwest Alaska Municipal Conference
TAAC	Trade Adjustment Assistance Center
USDA	United States Department of Agriculture

Executive Summary

This report examines the importance of seafood harvesting labor data, outlines a roadmap for improving that data for SWAMC's constituents, and identifies roadblocks likely to prevent the development of comprehensive system for collecting seafood harvesting labor data.

Alaska's seafood harvesting and processing sector provides more direct jobs than oil and gas, mining, agriculture, and forestry plus their associated primary processing industries combined (Northern Economics, Inc., 2003). In some regions areas of the state, such as the Aleutians and Pribilof Islands, Bristol Bay and Kodiak regions, jobs in the seafood industry account for around half of all employment. These jobs are generated in fisheries under state management, fisheries under federal management, and jointly-managed fisheries, which are primarily fisheries in federal waters managed by the State of Alaska under federal delegation.[1]

Problem Statement

As shown in Figure ES-1, crewmembers differ from other groups involved in harvesting and processing seafood in terms of the amount of data collected on their activities, and these differences result in less overall information being available for stakeholders. For example, individuals working in Alaska's shore-based fish processing sector are wage-and-salary employees. This classification means that the number of processing jobs is recorded in the annual average monthly employment statistics reported by the Alaska Department of Labor and Workforce Development. Commercial fish harvesters are exempted from unemployment insurance and other employment reporting requirements because these crewmembers are classified as self-employed. Consequently, detailed information on harvesting workers is generally not available for most Alaskan fisheries. Currently, we know the number of crew license holders by community each year. We do not know:

- The number of active crew license holders by community or in total each year
- The number of active crew license holders by fishery
- The number of days active crew license holders work in total, by community, or by fishery
- The income of active crew license holders in total, by community, or by fishery

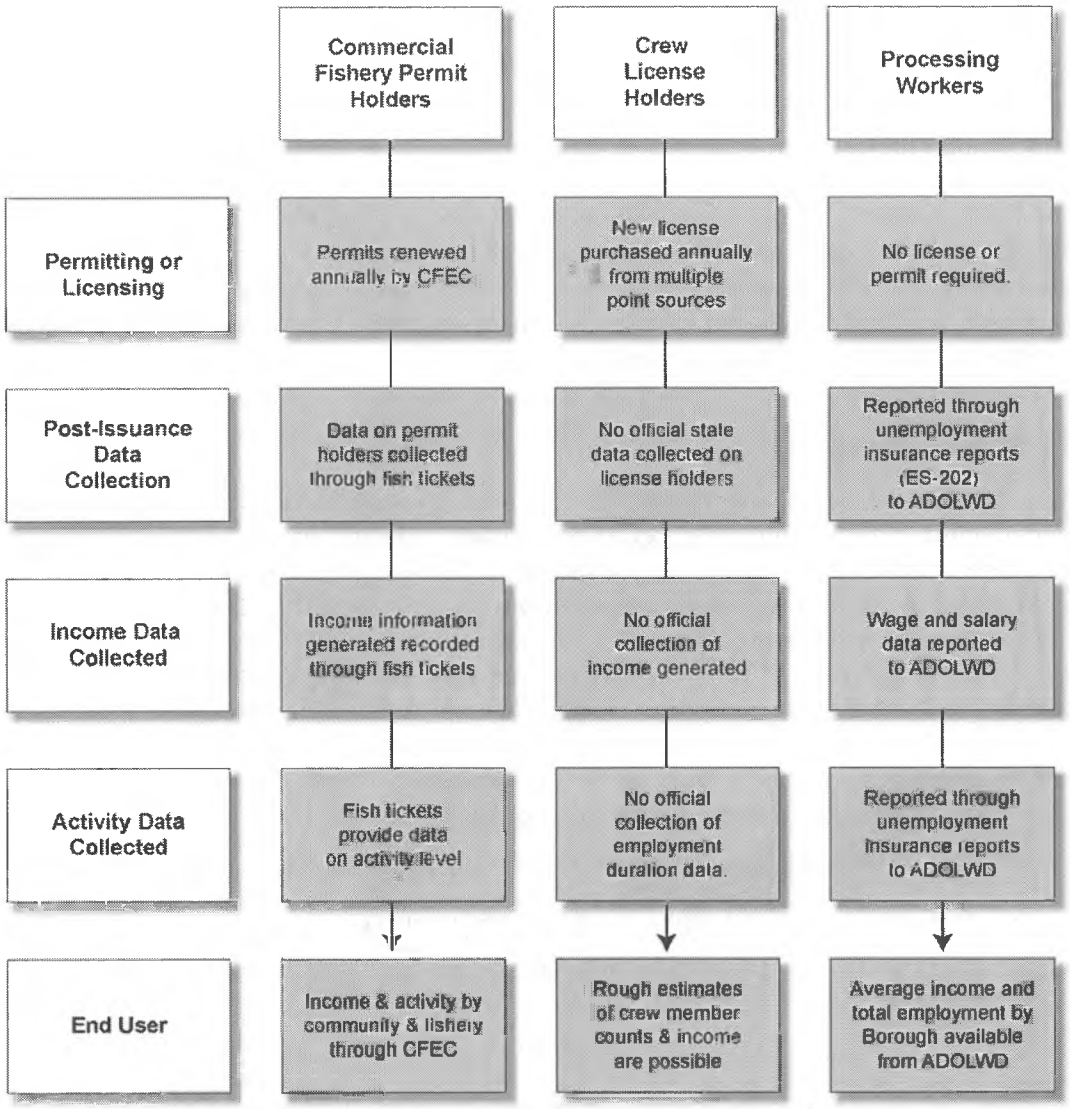
At the same time, this information is available for permit holders. Thus, those dependent on crew data for public policy-making must make do with lesser quality data.

The dilemma created by the lack of adequate seafood harvesting employment is succinctly summarized in a recent report issued by the Alaska Department of Fish and Game:

> ...crewmembers cannot be linked to a particular fishery or area because their licenses are general to all commercial fisheries. Using the existing data, it is not possible to know if the crewmember fished at all, where they fished, how much they fished, how many crew fished from a vessel, or how much they earned. Because crewmember identification is not recorded on fish tickets, it is not possible to associate crew sizes or crew earnings with a particular fishery or area using fish ticket data (Shirley 2005).

[1] The federal government has primary jurisdiction over EEZ groundfish, halibut, and most sablefish fisheries, and joint jurisdiction is found in king crab and tanner crab fisheries in the areas from Dutch Harbor to Norton Sound, as well as the Southeast Alaska Chinook troll fishery. The state manages inshore (non-EEZ) sablefish fisheries in Southeast Alaska and a portion of the Pacific cod fishery, with primary jurisdiction over all other fisheries.

Figure ES-1. Seafood Harvesting and Processing Data Flow[2]



The lack of crew data has real world implications for SWAMC constituents as well as for the crewmembers themselves. During key informant interviews, constituents indicated that the largest problem arising from the lack of seafood labor harvesting data was difficulty applying for federal grant monies and programs. Constituents indicated repeatedly that improved seafood harvesting labor data are needed simply to place constituent communities on equal footing with communities that are not dependent on the seafood industry for labor and, therefore, are able to provide accurate descriptions of their communities to grant reviewers. Additionally, interview participants indicated that equivalent data are needed to place crewmembers on equal footing with permit holders when it comes to proving their historical participation in fisheries. This type of proof is often critical when applying for federal programs or when trying to influence fisheries management decisions.

[2] We note that confidentiality rules affect the development of aggregate reporting standards by community, fishery, borough, or census area.

Project Goals

The overarching goal of this project is to outline the hurdles in creating improved seafood harvesting labor data systems and to determine what facets of an improved system are most important to stakeholder groups. Specific objectives of the project include the following:

- Further explore the issues associated with seafood harvesting labor data
- Collect information on current data collection and past estimation efforts
- Define unfulfilled organizational needs for seafood harvesting labor data
- Suggest new data collection methods or systems that would eliminate the unfulfilled needs
- Evaluate potential systems from multiple perspectives and identify the positive and negative attributes of each system as well as the potential hurdles to implementing each system

Project Process

The project involved a multi-step process to accomplish the objectives outlined above. The process began with client meetings and culminated in a work group session of seafood harvesting labor data stakeholders and the recommendations contained in this report.

The aim of the first phase of the study involving meetings with the client was to define all the issues related to the collection of seafood harvesting labor data in Alaska fisheries. Concurrently, the study:

- Examined the current state of seafood labor harvesting data
- Identified sources of past and current estimates of seafood harvesting labor in Alaska fisheries, examined the strengths and limitations of the various sources, and presented the results in a comparative format.

After reviewing current seafood harvesting labor data and efforts to improve that data, the study conducted a series of key informant interviews with the goal of adding depth to our understanding of the human cost of problems with seafood labor harvesting data. Additionally, the information gathered in these interviews formed the basis for the initial action options presented to the work group of seafood harvesting labor data stakeholders.

When the study completed the steps above, SWAMC convened the work group. The results of the study were communicated to work group participants in a document that SWAMC provided to each participant prior to the work group session.

Results of the Work Group Session

Work group participants did not reach a clear solution to the issues discussed in this report. While participants generally acknowledged the need to improve fisheries employment data, they did not agree on:

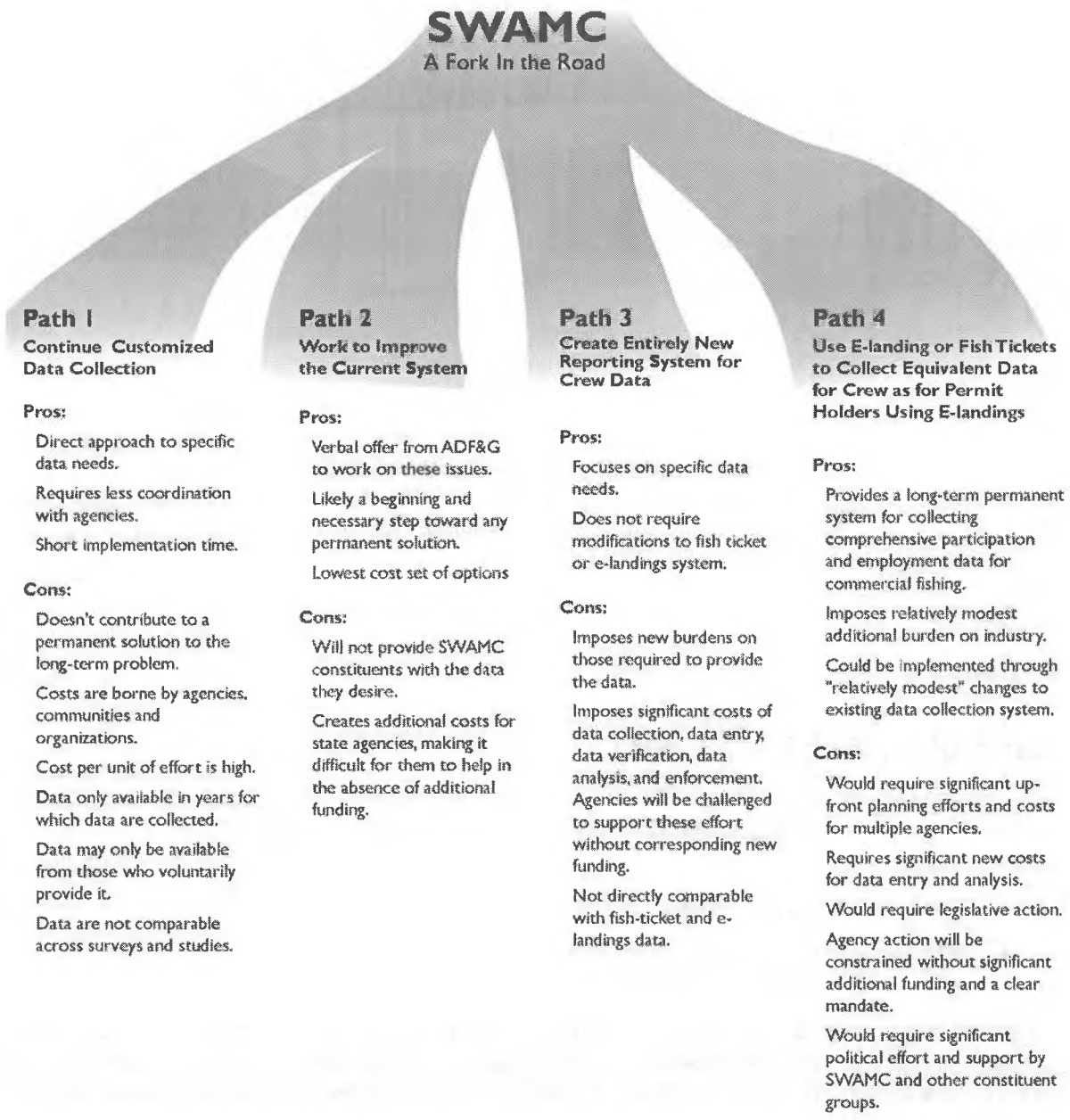
- How much change is needed
- Whether the change needed could be accomplished by upgrading the current system or would entail creating a new system

However, the work group session identified several options for improving Alaska fisheries employment data, and described the advantages, disadvantages, practical challenges and uncertainties associated with each option. In addition, convening the work group served to initiate a

discussion of these options among a variety of stakeholders, including agencies and individuals who would play a key role in implementing any of the options.

Based on the work group discussion and our past experience with the process by which changes have been brought about to systems of data collection, analysis and dissemination, we see four broad "paths" which SWAMC and others might pursue to achieve the goal of improved fisheries employment data. We discuss these paths below. Each of these four paths comes progressively closer to meeting SWAMC's needs and objectives, but also would require progressively greater commitment, coordination, and effort by SWAMC and other organizations. In moving forward, SWAMC needs to decide which of these paths will best serve its short and long-term needs. Figure ES-2 summarizes these paths.

Figure ES-2. Four Paths to the Goal of Improved Fisheries Employment Data



Path One: Continue Customized Data Collection Efforts (Status Quo)

The first path is essentially the status quo path. Under this path, there would be no changes to the current system with regard to regular fisheries-related data collection, analysis and dissemination. Rather, agencies, communities and organizations desiring more employment data than the system currently provides would collect that information through ad hoc studies and surveys—as is currently done.

There are some advantages to this approach in that it does not require any broad-based, long-term planning or development of consensus among different agencies. Studies can be implemented within a relatively short period of time and tailored to collect the specific data needed.

The essential drawback to this approach is that it doesn't solve the long-term problems that SWAMC has identified. There would continue to be significant gaps in fisheries employment data; the costs of additional data collection would continue to be borne by individual agencies, communities and organizations, with a high cost per unit of effort; the additional data would only be widely disseminated if the people who collected it chose to do so; and data would not necessarily be comparable across surveys and studies.

Path Two: Work to Improve the Current System

Making minor modifications to the current system based on crew licenses is the easiest path to getting better employment data. Specific potential improvements include collecting more information with crew licenses, improving the completeness and accuracy of data obtained from crew licenses, and expanding analysis of crew license data. As discussed in Section 6, the work group identified key questions related to the completeness and accuracy of the data presently obtained from crew licenses, as well as what might be involved in addressing these issues. Answering these questions is critical to establishing the extent to which employment data could be improved by changes to the existing crew license system.

The work group discussion also revealed that more fundamental changes to the fisheries employment data collection system (Path 3 or 4) would require incurring additional costs as well as addressing these key questions. Work group participants from state agencies indicated that any substantial new efforts requiring more personnel or materials would also require some new level of funding or the scaling back of other agency efforts. While agencies acknowledge the need for change, they also recognize that legal, policy, and budgetary frameworks constrain their ability to respond.

Path Two is unlikely to meet the needs of SWAMC, other constituent groups, or management agencies for comprehensive information on seafood harvesting employment by fishery and community. Further, even relatively small changes would impose at least some additional costs on the agencies that administer the current system and would require investment of political effort on the part of supporting stakeholder groups.

Path Three: New Reporting System for Crew Data

A third path involves the creation of an entirely new reporting system for the specific purpose of improving crew employment data. Examples of potential approaches include (but are not limited to) regularly-scheduled fisheries employment surveys, an annual permit holder report, or an annual crewmember report. Regional solutions are also possible, such as requiring permit holders in the Bristol Bay salmon fishery to list crew numbers on fishing district registration cards—this would provide information on employment and participation, but only for a specific fishery.

The advantages of developing a new crew employment reporting system, either statewide or regionally, is that it could be tailored to meet specific data needs and would not require changes to existing, complex systems such as crew licensing, fish tickets, or eLandings.

However, there are numerous disadvantages to this path. Any new reporting system would impose additional burdens on those required to provide the data, and would impose significant costs on the agencies responsible for data collection, data entry, data verification, data analysis, and enforcement. Agencies would be hard pressed to develop and implement a new data collection system without a substantial increase in funding. Surveys are expensive, difficult to conduct correctly, and typically collect limited information. Further, data collected by a new system may not necessarily be directly comparable with fish ticket and eLandings data.

Path Four: Create a System Collecting Equivalent Data for Crew as for Permit Holders

This path would go beyond the minor modifications of Path 2 but stop short of developing an entirely new system as with Path 3. It would provide a system for collecting essentially the same information for crew as is presently collected for permit holders in Alaska fisheries—thus providing a way to collect comprehensive information about participation and employment information for all persons participating in Alaska fisheries. This could be done by recording crew identifiers—permanent crew license numbers—on eLandings records and/or fish tickets. In effect, the collection of crew employment information would be built into the system at its most basic level.

This path would impose a relatively modest burden on fishery participants. However, implementing such a change would require significant up-front planning efforts for multiple federal and state agencies, and would require significant new costs for data entry and analysis. It would require legislative action to implement, and agencies would be unlikely to support it without significant additional funding and a clear mandate. As previously noted, these agencies acknowledge the need for change, but they also recognize the legal, policy, and budgetary frameworks that constrain their abilities to respond. SWAMC and other stakeholders interested in change must also recognize these and establish goals that enable state and federal agencies to address these issues. This path would likely require significant political effort and support by SWAMC and other constituent groups.

How to Keep Building Momentum

In whatever direction SWAMC chooses to move, it is clear that a key component of success will be building and maintaining momentum. We believe the following recommendations will help SWAMC continue to move forward. As shown in Figure ES-3, moving forward is a multi-step commitment.

Pick a Path and Decide What Information is Most Important—The Best Information is also the Most Difficult to Acquire

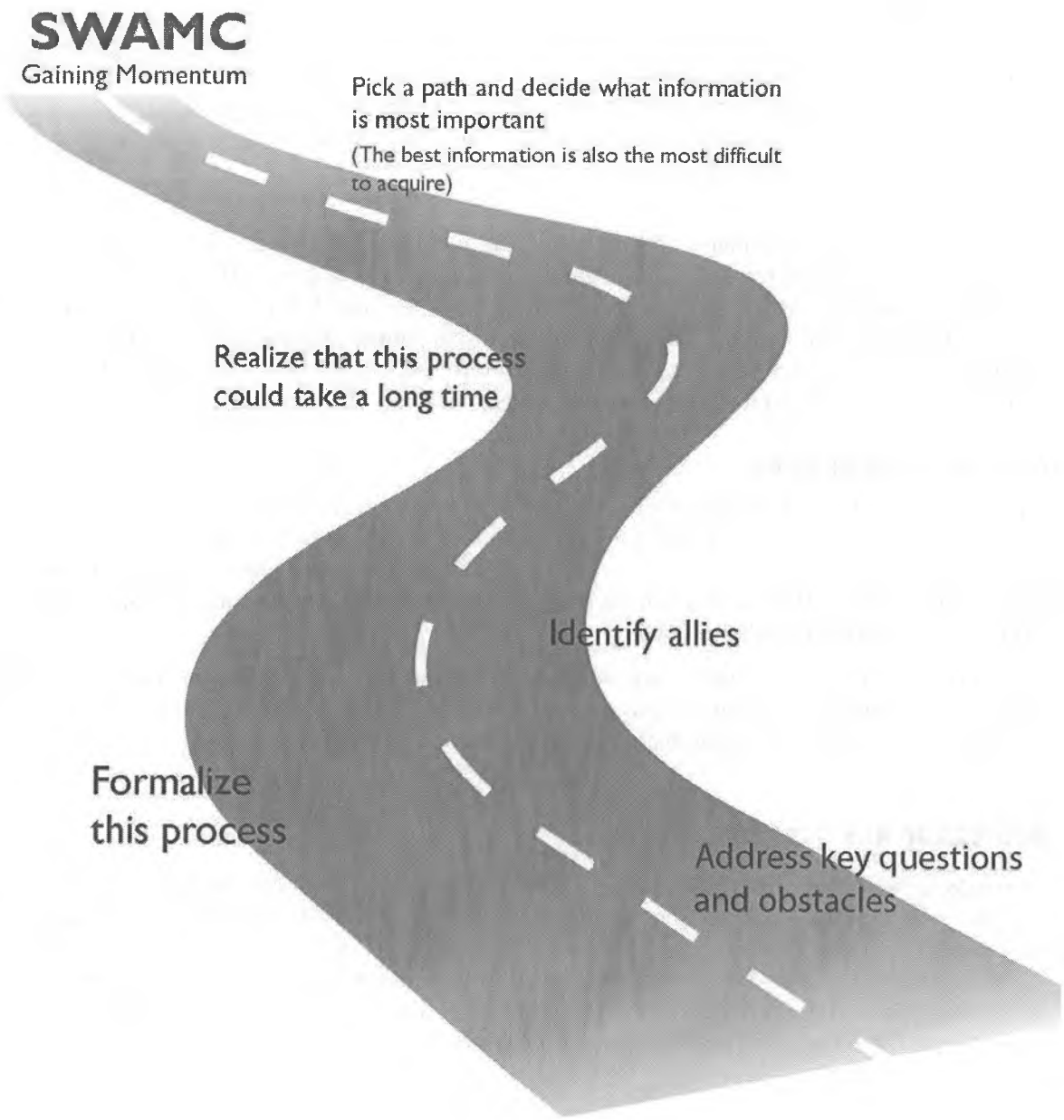
By commissioning this project, SWAMC has already taken the first steps toward adopting this recommendation. This project affirmed that SWAMC and its constituents need reliable annual data on seafood harvesting labor on a fishery and community level. The project also affirmed that the best information will be the most difficult to acquire because it requires the greatest time and money. It is now in SWAMC's hands to decide whether the pursuit of a long-term solution that meets constituent needs is worth the effort it will take to change the current system.

Realize that This Process Could Take a Long Time

SWAMC needs to realize that the path toward an acceptable permanent solution could take a long time. Work group discussions clearly showed that these sessions were simply the first step in what is

likely to be a lengthy process. Changing the fishing employment data collection system will require long-term coordinated efforts that start by convincing key stakeholders that the system needs to be changed.

Figure ES-3. Steps to Building Momentum



Identify Allies

SWAMC and its constituents need to identify allies that can assist them in this process of changing the fishing employment data collection system. One benefit of the work group session was that faces and names came together. Additionally, the session clarified stakeholders' needs. The stage is now set for SWAMC to work on identifying stakeholders that would make good partners in this process and build bridges to those stakeholders. Again, the work group session was a positive start along this road;

however, SWAMC must also work toward recruiting from outside the work group. Work group size limits and other factors prevented the involvement of potential allies in this initial meeting.

We also suggest reaching out to potential allies outside of Alaska. For example, Jon Isaacs, the work group moderator, noted that staff members of the NOAA Fisheries Pacific Regional Office are facing many of the same crew data collection issues. Identifying allies on a national level could help force change through the federal system.

SWAMC legislators and other legislators interested in fishing employment data issues will be key allies in the process of change. Participants in the work group session repeatedly indicated that state and federal agencies do not have a legislative mandate (or funding from the legislature) to address these issues. We believe that a legislative mandate will be a key component of a permanent solution.

Formalize the Process

Once allies have been identified and recruited, the next step may be to formalize the process of improving fishing employment data through a continuing working group. The more that this group can secure commitments of staff and staff time from state and federal agencies, the higher the likelihood of long-term change. The authors believe that formalizing the process is the best way to ensure that this issue keeps moving forward. Without formal commitments and regular meetings, the process is likely to stall and the benefits of this project will likely waste away.

Begin Eliminating Obstacles

Another key step toward maintaining momentum is to begin addressing the key questions and issues outlined in the section below. These questions will delay progress toward a permanent solution until they are addressed. ADF&G representatives at the work group session made verbal commitments to explore these issues. Their efforts will be more successful if they receive support from a formalized working group and the legislative branch.

That said, it has been clear throughout the project that the specific information desired by SWAMC will only be provided by a clear, long-term solution that moves the collection of accurate crew data to the same level of effort that government currently places on permit-holder data.

Addressing Key Questions and Issues

The study group believes that SWAMC has been interested throughout the project in either Path 3 or Path 4, which would lead to the development of a permanent solution that accurately and consistently provides desired data on seafood harvesting labor on an annual basis. This study identified key questions and issues that must be addressed before the long-term solution envisioned in Path 4 is possible. The most important of these questions and issues are discussed briefly below. Note that many of these questions and issues also apply to Paths 2 and 3, and that Paths 2 and 4 could be pursued concurrently.

There are differences in perceptions about what the current system is capable of accomplishing

There was disagreement among work group participants about what the current data collection system based on crew licenses is capable of accomplishing. Some participants who had worked with the data in the past indicated that they believed they firmly understood the limitations of the current system, and concluded that it was not possible to achieve the kind of employment data that are needed solely by improving the current system (Path 2). Others said that they felt the capabilities and limitations of the current system are not completely understood, and that changes to the system might

address many of the perceived data gaps. Clearly, key stakeholders must agree about the capabilities and limitations of the current system and the need for an improved system before significant progress can be made.

Thus, a key effort to resolving this issue is finding a mechanism that generates a consensus on the need for significant change. The work group session was a first step in building that mechanism. By the end of the work group session it was clear that many parties recognized the current system's limitations. That said, unofficial acknowledgement in a small work group is not the same as official and public recognition. The latter will be needed to move any substantial effort for more extensive change (Path 3 or 4) forward.

We need to clarify implications of confidentiality laws and inclusion of crew information on fish tickets

Several of the long-term options discussed during the work group session included the idea of including crew identifiers on fish tickets or eLandings records as a way of recording crew participation in fisheries. This change would be at the heart of most approaches to Path 4.

While there was broad support in the work group session for this concept, several participants raised concerns about confidentiality issues. The key question is whether including crew identifiers and other information on fish tickets and/or eLandings would necessarily give crew legal access to information on the fish tickets and, if so, to what information. This question will have to be answered by legal counsel and may require a court decision in the long run. If crewmember data are treated in the same manner as vessel owner data, crewmembers will not automatically have access to harvest and price information included on fish tickets. However, if crewmembers are treated like permit holders, they would have access to harvest and value data that they are not currently able to access. Thus, there are important unanswered questions regarding the use of fish tickets to record crew data:

- Will crew be able to access fish ticket data beyond their own participation?
- What is the functional effect of allowing access to more than just participation data?
- Is potential access by crewmembers to more than participation data a political obstacle that would stop forward progress in developing any new system of data collection?

Path 4, which involves including unique crew identifiers to fish tickets and/or eLandings, raises a variety of practical issues relating to how difficult this change would be. Examples of these issues include, but are not limited to, the following:

- Can fish tickets physically hold more information? Some participants indicated that the fish ticket has reached its functional limit in the amount of information it can collect.
- How much time and effort would be required of permit holders and/or crew to include this information?
- What additional burden would be placed on processors who, at present, bear responsibility for the accuracy of the information on fish tickets?

These issues were raised by the work group, and were cited as potential arguments against this approach. Without more information, the extent to which they are valid or significant concerns is unclear.

We need to ensure accuracy and completeness of current data first

The work group expressed varying levels of faith in the accuracy and completeness of data currently collected from crewmembers. However, there was consensus within the work group that a logical and

prudent first step in any process to improve crew data collection would be to ensure that the current system collects accurate and complete data. One fact that came to light during the work group session was that license holders are not required to show photo identification when purchasing a license. While checking an individual's driver's license or other means of identification would seem to be a logical step in ensuring the accuracy of collected data, there was some concern from ADF&G work group participants that vendors would be unwilling to demand that applicants provide some means of personal identification.[3]

The work group discussed several steps to ensuring the accuracy and completeness of current data:

- Checking the photo identification of crew license applicants to ensure that data recorded on licenses are accurate
- Automating the current license application system to include better online options and encourage more online participation
- Creating a professional crew license containing a barcode that could be used to record participation in fisheries

Understand how the current vendor system is important to stakeholders

The work group repeatedly heard concerns about the current vendor system for issuing commercial crewmember licenses. The system is composed of many small and large retail vendors. Licenses are recorded on paper and copies are forwarded to ADF&G for data processing. Although this low-tech approach makes licenses easy to acquire and replace even in the most remote locations, it requires extensive labor both for the vendor and ADF&G. Key questions that need to be answered include:

- Is the state willing to allow the vendor system to change? Does the system serve the licensing program or does the licensing program serve the vendor system?
- How expensive would it be to replace or modify the vendor system with a system that would issue more durable licenses that can interact with modern technology?
- Would there be long-term cost savings by replacing paper licenses that need hand data entry with an all electronic system?

In recent years, licenses have also been available on the Internet. If an applicant purchased a license in previous years, the Internet application automatically completes the applicant's address if he or she enters the exact name and birth date used in prior years. Thus, ADF&G is already using an option that could affect the current vendor system. The authors note that if the system is capable of retaining an individual's address from year to year than it also might be capable of retaining a permanent identification number from year to year.

[3] The same vendors also sell recreational fishing licenses and photo identification is required to purchase these licenses.

1 Introduction

Fisheries management has moved away from an early preoccupation with the fish to a greater concern about the livelihoods of the fishers and their families (Welcomme, 2003). This increased social and economic dimension has given rise to the need for other categories of information than the simple fisheries statistics that formed the traditional basis for management.

This report examines the importance of quantifying the contribution of Alaska fisheries to employment. Alaska's seafood harvesting and processing sector provides more direct jobs than oil and gas, mining, agriculture, and forestry combined plus their associated primary processing industries (Northern Economics, Inc., 2003). In some regions of the state, such as the Aleutians and Pribilof Islands, Bristol Bay and Kodiak regions, jobs in the seafood industry account for around half of all employment. These jobs are generated in fisheries under state management, fisheries under federal management, and jointly-managed fisheries, which are primarily fisheries in federal waters managed by the State of Alaska under federal delegation.[4]

Individuals working in Alaska's fish processing sector are wage-and-salary employees. Consequently, the number of processing jobs is recorded in the annual average monthly employment statistics reported by the Alaska Department of Labor and Workforce Development. However, these labor force estimates do not include commercial fishing harvesters, as employment data are collected only for those jobs that are subject to employment regulation. Commercial fish harvesters are exempted from unemployment insurance and other employment reporting requirements. These jobs are generally classified as self-employed.

The dilemma created by the lack of adequate seafood harvesting employment data is succinctly summarized in a recent report issued by the Alaska Department of Fish and Game:

> ...crewmembers cannot be linked to a particular fishery or area because their licenses are general to all commercial fisheries. Using the existing data, it is not possible to know if the crewmember fished at all, where they fished, how much they fished, how many crew fished from a vessel, or how much they earned. Because crewmember identification is not recorded on fish tickets, it is not possible to associate crew sizes or crew earnings with a particular fishery or area using fish ticket data.
>
> In the past, some economists have assumed that crewmembers are hired from the permit holder's home town, and they therefore attribute the crew's earnings or tax information to the permit holder's home town. This assumption may not be correct for all fisheries (Shirley, 2005:13).

Increasingly, the Southwest Alaska Municipal Conference (SWAMC) and other constituent organizations find that the seafood harvesting labor data are neither sufficiently current nor adequate in quantity or quality for analysis to support decision-making. Therefore, these entities are trying to change the way data are collected and compiled. The primary objective of this report is to assist SWAMC in this effort. To meet this objective, the report examines why existing data fail to meet the needs of SWAMC, and defines those problem areas that only can be addressed by expanding the current data collection programs and by establishing additional programs.

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[4] The federal government has primary jurisdiction over groundfish, halibut, and most sablefish fisheries, and joint jurisdiction is found in king crab and tanner crab fisheries in the areas from Dutch Harbor to Norton Sound, as well as the Southeast Alaska Chinook troll fishery. The state manages inshore sablefish fisheries in Southeast Alaska and a portion of the Pacific cod fishery, with primary jurisdiction over all other fisheries.

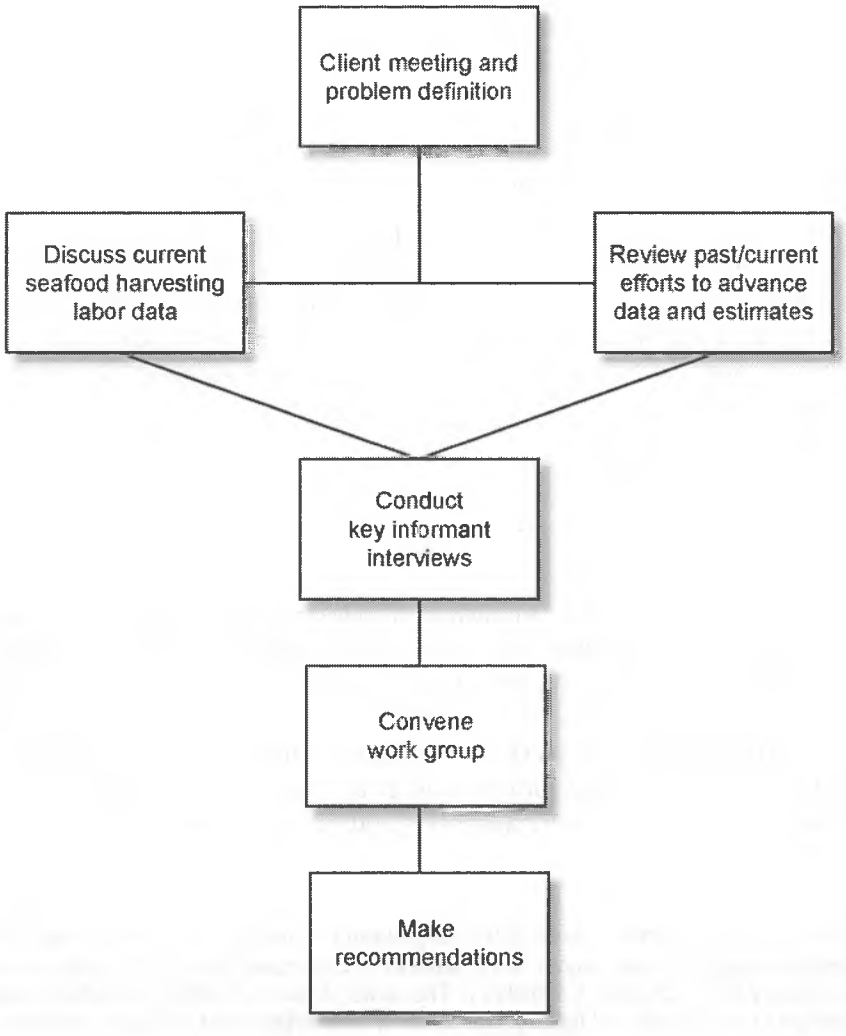
1.1 Project Process and Report Organization

The overarching goal of this project is to outline the hurdles in creating improved seafood harvesting labor data systems and to determine what facets of an improved system are most important to stakeholder groups. The broader goals for the project are:

- Further explore the issues associated with seafood harvesting labor data.
- Collect information on current data collection and past estimation efforts.
- Define unfulfilled organizational needs for seafood harvesting labor data.
- Suggest new data collection methods or systems that would eliminate the unfulfilled needs.
- Evaluate potential systems from multiple perspectives and identify the positive and negative attributes of each system as well as the potential hurdles to implementing each system.

The project involved a multi-step process to accomplish the goals outlined above. The process began with client meetings and culminated in a work group session of seafood harvesting labor data stakeholders and the recommendations contained in this report. This process is outlined in Figure 1.

Figure 1. Project Process



The first phase of the study included meetings and discussion with the client to define the issues with current seafood harvesting labor data. The results of this work are contained in Section 2.

Concurrently the study then:

- Examined the current state of seafood labor harvesting data. This discussion is contained in Section 3.
- Explored sources of past and current estimates of seafood harvesting labor in Alaska fisheries. The discussion focuses on the strengths and limitations of various sources of both primary and secondary data in a comparative format. Section 4 contains this information.

After review of the current data and efforts to advance that data, the study conducted a series of key informant interviews with the goal of adding depth to our understanding of the human cost of problems with seafood labor harvesting data. Additionally, these interviews formed the basis for the initial action options taken before the work group. The interviews are discussed in Section5.

When the study completed the steps above, SWAMC convened the work group of seafood harvesting labor data stakeholders. The study communicated the information collected in the preceding steps to work group participants in a document that SWAMC provided to each participant prior to the work group session. Section 6 contains a discussion of the work group process.

The last step of this particular study identifies key issues and obstacles discovered during the rest of the study, discusses SWAMC's options for moving forward, and methods for building and maintaining momentum should SWAMC choose to continue addressing this issue through a formal process. Section 7 contains these recommendations.

2 Problem Statement and Project Objective

Alaska's seafood harvesting and processing sector provides more direct jobs than oil and gas, mining, agriculture, and forestry combined (Northern Economics, Inc. 2003). In some regions of the state, such as the Aleutians and Pribilof Islands, Bristol Bay, and Kodiak regions, jobs in the seafood industry account for around half of all employment.

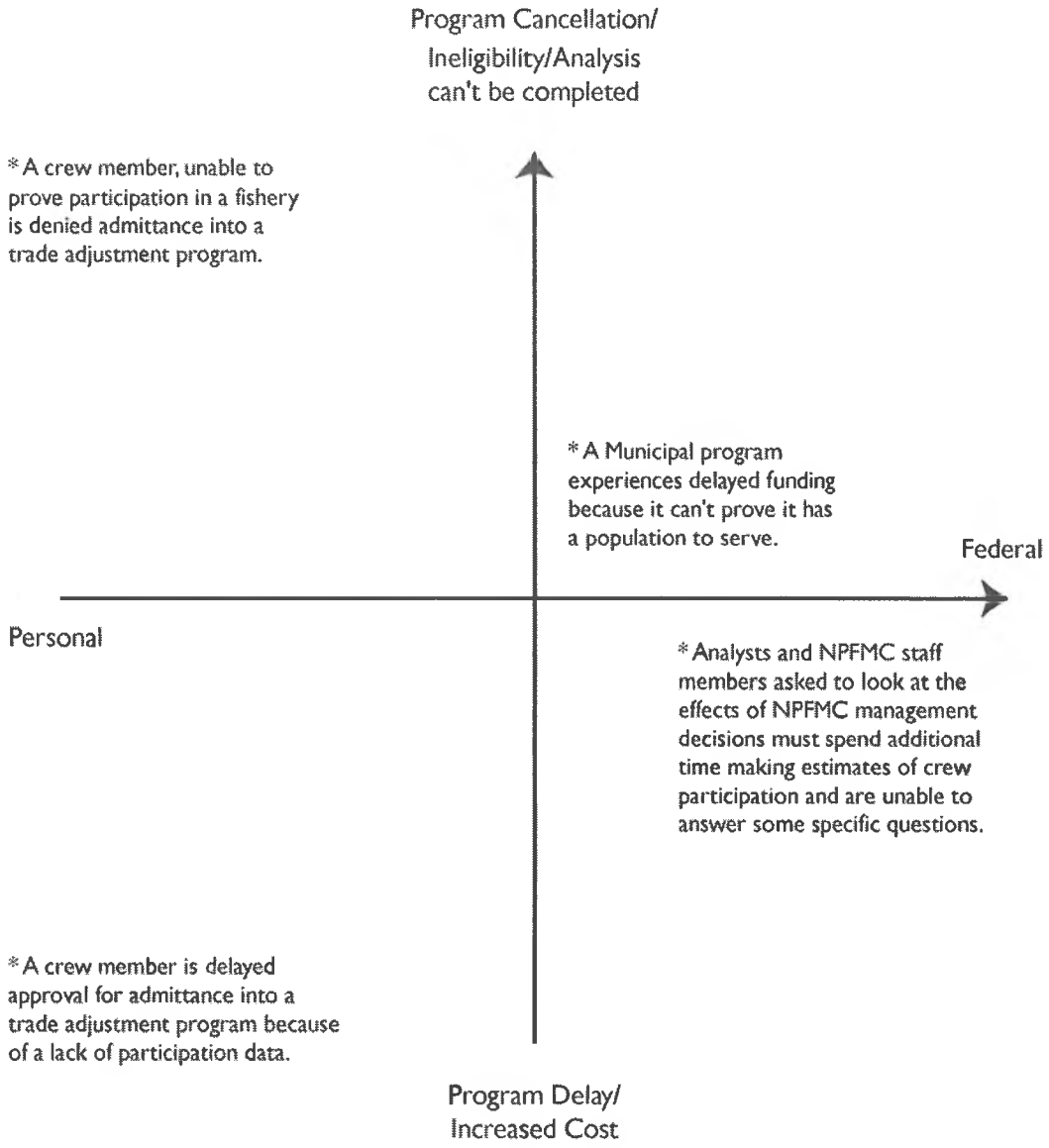
In spite of the importance of this sector, the current labor data collection system does not allow for an accurate accounting of the number of crew harvesting jobs that are created. All of the numbers regarding harvesting jobs in the industry are at best reasoned estimates, but more typically they are wild guesses. In a recent article the Anchorage Daily News Wesley Loy (2006), stated that at *"the height of the summer season, more than 20,000 commercial fishermen chase salmon and other types of fish...."* This number is derived from an estimate developed by Alaska Department of Labor and Workforce Development. In reality, there are no data that actually count the number of fish harvesters in Alaska. There are data that count the number of fish processing workers in each borough and indicate the total and average wages earned. There are also data that provide counts of the number of active permit holders at any time any over the course of the year, along with data that indicate total landings and revenue generated by that activity (as well as the permit holder's name and place of residence). There are similar data for owners of active fishing vessels. But there are no data that provide counts of the number of active fishing crewmembers, no data that relate individual crewmembers to particular fisheries or vessels, and no data that link active crewmembers to particular communities.

In short, there is no reliable way to say with any degree of certainty how many people actually earn some part of their livelihood from participating on fishing crews in Alaska, nor can we say who those people are and where those people live.

The primary objective of the Seafood Harvesting Labor Data Project is to outline a roadmap to creating a seafood harvesting crewmember data collection system that will allow accurate reporting of the participation of active individual crewmembers by community, provide an indication of the level of participation on a fishery-by-fishery basis, and determine the relative quality of seafood harvesting jobs over time.

The potential effects associated with a lack of reliable data on crewmembers range from the personal level all the way to the federal level, and the magnitude of these effects can stretch from increased costs and program delay to program cancellation and the inability to answer certain questions. Figure 2 shows hypothetical examples of the potential range of effects of not having specific crew data. The vertical axis measures the magnitude of the disruption (e.g., program delay to program cancellation) while the horizontal axis measures the distribution of the effect (e.g., personal to federal). The further right and up an effect is listed, the greater the magnitude and breadth of the potential disruption.

Figure 2. Examples of the Potential Range of Effects



The following paragraphs briefly describe several real world examples of how the lack of an effective harvesting crewmember data system has affected various agencies and stakeholders.

Trade Programs: The Trade Adjustment Assistance Act of 2002 authorized training benefits for Alaska salmon fishermen who received lower incomes because of imported salmon. In some cases, crewmembers who wanted to take advantage of the program found themselves shut out because they couldn't prove that their employment and income was affected by foreign farmed salmon or that they were Alaska salmon fishermen. No one argued with the fact that prices for wild salmon had been affected, but making a claim based on employment was made very difficult by the lack of seafood harvesting data (Kuhar 2006).

Grant Applications: Federal and state grant application processes often require counts of the target populations to be served by a proposed program or proof that prior grants have resulted in increasing

jobs or job retention. For example, job creation and retention are the top criteria for the Economic Development Administration and USDA Rural Development, two of the most frequent funders in fisheries-dependent communities. However, currently collected public data do not count crewmembers in employment estimates and the lack of tracking system for crewmembers means that when programs do create jobs by keeping commercial fishing permits in the area, there is no legal proof that these program also result in increased local crew employment.

Fisheries Management and Research: The lack of crew data means that researchers and fisheries managers must employ "best estimate" methods. For example, as noted by Knapp, 2006, the quality of information available to estimate the change in number of jobs and days works for Kodiak-based crab fisherman because of the 2005 BSAI Crab Rationalization was quite low because there were "no reliable data on where crew live, or "average days spent in transit, in port between landings, or working for vessels before or after the season."

3 The Current State of Seafood Harvesting Labor Data

The existing seafood harvesting labor data collection system has a number of components which provide different levels of information across different fisheries. This section summarizes these components.

3.1 Current Seafood Harvesting Labor Data

At the heart of the current system are the state commercial fishing regulations, which require any person engaged in commercial fishing to hold an Alaska Department of Fish and Game commercial fishing crewmember license or to a current Commercial Fishing Entry Commission (CFEC) commercial fishing permit (limited entry or interim-use permit).[5] According to state regulations, the term "commercial fisherman" means an individual who fishes commercially for, takes or attempts to take, fish, shellfish or other fishery resources of the state by any means, and includes every individual aboard a boat operated for fishing purposes who participates directly or indirectly in the taking of these raw fishery products, whether participation is on shares or as an employee or otherwise. Crewmembers that do not directly or indirectly participate in the taking, such as vessel cooks and engineers, are included in the definition. However, many of these crewmembers also pull double duty as harvesting crewmembers. In addition, the definition includes the crews of tenders or other floating craft used in transporting fish to land and offshore processors. However, the definition does not apply to anyone aboard a licensed vessel as a visitor or guest who does not directly or indirectly participate in the taking. Processing workers aboard catcher/processors are also excluded in the definition.

ADF&G commercial fishing crewmember licenses are available for purchase at the same outlets that sell recreational fishing and hunting licenses, and are issued in a similar format. The forms are filled out by the vendor in duplicate and a paper license is issued to the applicant on the spot, with the original sent to ADF&G for eventual entry into the ADF&G fishing and hunting license database. The application for the ADF&G commercial fishing crewmember license requires information on the applicant's physical location of residence (city/state/zip code), Social Security Number (SSN), and residency status (Alaska resident/nonresident and U.S. citizen/alien).[6] However, because a person's SSN also allows access to an individual's financial information, distribution and use of SSNs are strictly limited to state agency personnel.

The ease of obtaining an ADF&G crewmember license and their wide availability—they may be obtained in nearly every community in Alaska—are important positive attributes of the current system. Fishing crewmembers are often hired at the docks on very short notice, and often for very limited periods. They need to be able to obtain licenses quickly and easily, and the current system facilitates these hiring practices.

With the current ADF&G crewmember data, in combination with CFEC permit holder data, it is possible to determine the number of people who are eligible to work in the fisheries as crewmembers in a given year. CFEC has developed these estimates for years 2000 and 2002 – 2005. These reports may be accessed electronically (http://www.cfec.state.ak.us/fishery_statistics/permits.htm). Due to problems with the data, the reports are unavailable for 2001. While the CFEC reports allow the users

[5] All current CFEC Permit Holders are exempt from the requirement to hold a current ADF&G crewmember license.

[6] Notwithstanding the requirement to include their SSN licenses are in fact issued to persons that do not report their SSN.

to estimate the upper bound of the number of persons engaged in commercial fishing in any community or in all Alaska fisheries, it is not possible to determine whether a particular license holder actually participated in any fishery. Table 1 shows the CFEC permit holder and crewmember counts for 2005. Not counting ADF&G license holders that did not report their SSNs, a total of 30,649 persons were eligible to participate in harvesting activities in Alaska fisheries in 2005. Of these 19,940 were Alaskans, and 10,709 were non-Alaskans.

Table 1. CFEC Permit Holder and Crewmember Counts, 2005

Borough or Census Area	CFEC Permits	ADF&G Licenses	All
Aleutians East Borough	203	222	425
Aleutians West Census Area	99	243	342
Anchorage Municipality	873	1,015	1,888
Bethel Census Area	1,104	654	1,758
Bristol Bay Borough	179	172	351
Denali Borough	3	2	5
Dillingham Census Area	645	643	1,288
Fairbanks North Star Borough	138	67	205
Haines Borough	114	85	199
Juneau City And Borough	454	346	800
Kenai Peninsula Borough	1,396	1,463	2,859
Ketchikan Gateway Borough	348	296	644
Kodiak Island Borough	680	801	1,481
Lake And Peninsula Borough	173	273	446
Matanuska-Susitna Borough	256	279	535
Nome Census Area	230	151	381
North Slope Borough	9	5	14
Northwest Arctic Borough	149	58	207
Prince Of Wales-Outer Ketchikan Census Area	352	295	647
Sitka City And Borough	574	531	1,105
Skagway-Hoonah-Angoon Census Area	250	147	397
Southeast Fairbanks Census Area	19	14	33
Valdez-Cordova Census Area	414	391	805
Wade Hampton Census Area	642	643	1,285
Wrangell-Petersburg Census Area	790	617	1,407
Yakutat City And Borough	161	45	206
Yukon-Koyukuk Census Area	143	15	158
Unknown Alaska	69	0	69
Alaska Total	10,467	9,473	19,940
Non-Resident Total	3,634	7,075	10,709
Overall Total	14,101	16,548	30,649

Note: ADF&G license holders that did not report their SSN are excluded from this report.
Source: CFEC Permit Holder and Crewmember Counts at www.cfec.state.ak.us/cpbycen/2005/Mnu.htm. Accessed on November 1, 2006.[7]

[7] The authors note there are significant limitations with these reports in that they represent one-time snap shots of available data. Individual reports are not updated as the data are cleaned and the data are left in a provisional form.

3.1.1 Shortcomings of Commercial Crew License Data System

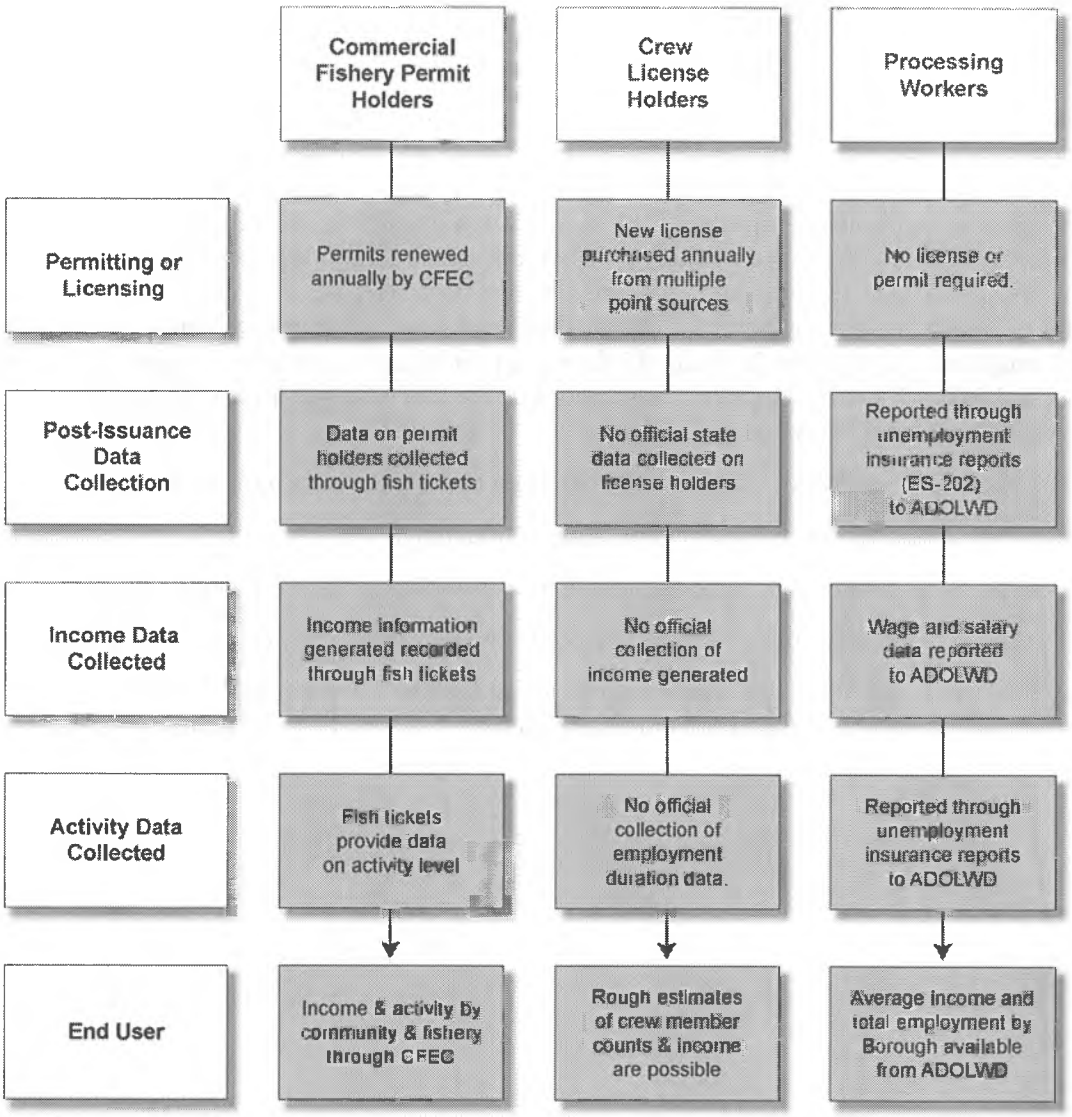
From a data perspective, there are three principle shortcomings of the ADF&G crewmember license system: 1) Licenses are issued annually—there is no linkage between previously issued licenses and currently issued licenses; 2) Once the license is issued, there is no mechanism for reporting whether the holder actually participated in the fishery; 3) There are limited demographic data collected.

As shown in Figure 3, the data flow for crewmember licenses is substantially different for the other major groups of individuals involved in harvesting seafood and results in less overall information being available to the end user. For example, individuals working in Alaska's shore-based fish processing sector are wage-and-salary employees. This classification means that the number of processing jobs is recorded in the annual average monthly employment statistics reported by the Alaska Department of Labor and Workforce Development. Commercial fish harvesters are exempted from unemployment insurance and other employment reporting requirements because these crewmembers are classified as self-employed. Consequently detailed information on harvesting workers is generally not available for most Alaskan fisheries. Currently, we know the number of crew license holders by community each year. We do not know:

- The number of active crew license holders by community or in total each year
- The number of active crew license holders by fishery
- The number of days active crew license holders work in total, by community, or by fishery
- The wage and income of active crew license holders in total, by community or by fishery

At the same time, we know this information for permit holders. Hence, there is an asymmetrical flow of data between commercial permit holders and commercial crew license holders.

Figure 3. Seafood Harvesting and Processing Data Flow[8]



3.1.1.1 Annual Issuance

The fact that licenses are issued annually and there is no link between previously issued licenses and current licenses, significantly increases data entry requirements and makes it very difficult to track license holders over time. This also limits the general usefulness of the data because in order to track license data accurately a unique identifier is required. With crewmembers, the SSN is the only unique identifier available, but because a person's SSN is highly confidential, it cannot be provided to persons outside the state agencies responsible for management. If licenses were renewed annually, the overall data entry burden could be reduced, and individuals could be permanently associated

[8] We note that confidentiality rules affect the development of aggregate reporting standards by community, fishery, borough or census area.

with a single unique license identifier. This would allow significantly wider use of license data even if other data shortcomings are not overcome.

3.1.1.2 No Mechanism for Reporting Activity

Any individual with a valid ADF&G crewmember license is eligible to be a member of a harvesting crew for any commercial fish harvesting operation in Alaska. In addition, any individual with a valid CFEC commercial fishing permit is also eligible to participate as a harvesting crewmember. Currently however, there is no mechanism for reporting activity. While regulations require that all landings and revenues be reported by vessel and by permit holder, there are no regulations that require members of the crew to be identified or reported. In part, the lack of a reporting requirement is due to the fact that fish harvesting crews are hired as self-employed contractors rather than as wage and salary employees. In general, state and federal regulations require businesses to identify their wage and salary employees by SSN and place of residence and to report their earnings every quarter.[9] There is no similar requirement for employers to report contract workers, and because harvesting crewmembers are self-employed contractors, there is no reporting of harvesting crew.

3.2 What Else Do We Know About Seafood Harvesters?

3.2.1 Seafood Harvesting Labor Composition

The fishing industry in Alaska is a diverse business encompassing everything from large catcher/processors (factory trawlers) with crews of over 100 workers to small two-man gillnetting boats (JobMonkey, Inc., 2006). Employment aboard fishing vessels may include a number of different types of jobs depending on the size of the vessel and other factors (U.S. Bureau of Labor Statistics, 2006). Large boats, especially those with on-board processing facilities, require a crew with a wide range of specialized skills. Smaller vessels typically depend on two or three individuals to operate, maintain and repair on-board fishing gear and machinery as well as perform all other vessel duties.

Most workers aboard fishing vessels begin as deckhands. Deckhands perform a variety of manual tasks on commercial fishing voyages: they prepare nets, lines and other fishing tackle to catch fish and other marine life; they sort and pack fish in ice; they handle mooring lines and may steer the vessel; they also repair nets, splice ropes, maintain fishing gear and clean surfaces. Deckhands who acquire experience and whose interests are in ship engineering—maintenance and repair of ship engines and equipment—can eventually become licensed chief engineers on large commercial vessels, after meeting the Coast Guard's experience, physical, and academic requirements. Experienced, reliable deckhands who display supervisory qualities may become boatswains. Boatswains may, in turn, become second mates, first mates, and, finally, captains. Fishing boat captains plan and oversee fishing operations—the fish to be sought, the location of the best fishing grounds, the method of capture, the duration of the trip, and the sale of the catch. Almost all captains become self-employed, and the overwhelming majority eventually own, or have an interest in, one or more fishing vessels.

In addition to fishing and vessel maintenance crew, catcher/processors carry a large array of factory workers, including entry-level processors (also known as "slimers"), roe-sorters and freezer crew as well as more experienced production line foremen and quality controllers.

[9] Businesses report employees every quarter by submitting an ES-202 report to the Department of Labor for the state in which they operate.

Used collectively in this report, the term "crewmember" applies to the captain and all individuals engaged in service on deck or in engineering departments or capacities aboard a fishing vessel. The term also includes processing-line workers aboard catcher/processors or floating processors.

Some analysts have argued that certain land-based jobs should be included as commercial fishing employment. The financial and technological complexities of the corporate-owned fishing fleets that operate in the waters off Alaska require shore-side offices staffed by financial mangers and accountants, communications specialists and other personnel. Although these workers are not crewmembers, they play an essential role in the management of fishing operations and their wages are part of the day-to-day costs of running a fishing business; therefore, they can be considered part of the seafood harvesting labor force. However, these individuals are captured in standard ES-202 labor reporting systems.

3.2.2 Seafood Harvesting Labor Characteristics

Fishing vessel crewmembers as a population have certain characteristics which make it difficult to fully estimate the participation of regional residents in seafood harvesting, particularly on a community and fishery level.

- Traditionally in many fisheries, crewmembers have been co-venturers in the fishing enterprise, sharing in both the risk and reward. Wages are often based on a share or percentage of harvest earnings.[10] As such, these jobs are generally classified as self-employed. Minimum wage laws do not apply to crewmember jobs, and workers are exempted from unemployment insurance and other employment reporting requirements.
- Most of the small, near-shore fishing vessels, such as those engaged in the herring and salmon fisheries, are independently owned and operated (DOLWD, 2006). Crews often consist of family members, and many of these family members—including children,[11] spouses and older adults—are not paid directly. Instead they're working toward a household wage. Unpaid labor remains a unique feature of the agriculture, forestry, and fishing sector and constitutes a significant part of the sector's workforce (U.S. Bureau of Labor Statistics, 2006). Most unpaid family workers assist fishing, but some also do bookkeeping, purchase supplies, or arrange the sale of the catch. While these individuals are required to have crew licenses their participation isn't captured in labor force participation rates or unemployment estimates.
- The occupation of seafood harvesting has the same proportion of full-time workers (persons who work 40 hours or more per week) as in the average for all occupations. However, few crewmembers hold fishing jobs year round. This reflects the seasonal nature of fishing work. The majority of crewmembers supplement their annual fishing income with shore-based jobs. In addition, for many Alaskans, full-time engagement in subsistence activities at certain times of the year represents an important element of their lifestyle (National Research Council, 1999). The seasonality of fishing employment makes it essential to obtain information regarding both the number of crew and the number of days fished per fishery to paint a complete picture of employment (Office of Management and Budget, 2003). For example, Fishery A may have 100 people employed in it, but only for two weeks out of the year (for 1,400 crew days). Fishery B might employ 50 people, but operate for 26 weeks (for 9,100

[10] Many boats charge a share of the operating expenses to crewmembers. These expenses may include food, fuel, bait and ice (DOLWD, 2006).

[11] A substantial proportion (11%) of Alaska resident ADF&G commercial fishing crewmember license holders between 1993 and 2003 were children aged 14 and younger (Carothers and Sepez, 2005).

crew days). Without information about the days of operation, it would appear that Fishery A provides more employment; however, it is clearly Fishery B that supports a higher level of employment.

- In addition to fishing (i.e., traveling to and from the fishing grounds as well as operating in the fishing grounds), crewmembers are often expected to perform work on their vessel and its associated gear while in port (DOLWD, 2006; McDowell Group, 1989). This non-fishing work may include helping off-load fish, maintaining fishing vessels while in port, and preparing for the next trip (Ingles, 2004). Crewmembers may or may not be compensated for this additional work. In addition to non-fishing work during the fishing season, there may be preseason preparations and postseason activities. For example, the skipper/owner of a salmon troller may actually fish only during the two to three month season, when in fact he typically devotes six months or more a year to essential work such as boat repair and maintenance, gear preparation and other activities directly related to commercial fishing (McDowell Group, 1989). Some crewmembers may receive off-season hourly wages to assist in these activities.
- Many crewmembers are very transient—they fish in many geographical areas and switch from boat to boat when space becomes available (e.g., to avoid problems with captains or other crew—getting along with shipmates is crucial for a crew that live within feet of each other for weeks at a time, sharing a single cabin) (Ingles, 2004).[12] Some crewmembers don't have a permanent address; they stay with friends, in hotels, or on the boat when on shore.
- Many people from states other than Alaska participate in the Alaska seafood harvesting sector as crew and sole proprietors. Participants include residents of Washington, Oregon, California and many other states. Carothers and Sepez (2005) reported about 7,800 unique U.S. communities listed as residences for ADF&G commercial fishing crewmember license holders for the period 1993-2003. The majority of these communities (83 percent) drew ten or fewer license holders. About 1,300 communities had more than ten crewmembers; just over 300 had more than 100. Only 66 unique communities supplied over 100 crewmember license holders in any single year.
- Both fishermen and vessels often participate in more than one fishery over the course of a year.[13] As such, fishery-specific surveys do not capture information about employment on a vessel in a fishery other than that being surveyed. To estimate total employment, it is necessary to collect average crew per trip per fishery as well as the number of days spent fishing in each fishery. Relying on existing information from a single fishery could lead to under- or overestimates of employment, depending on the degree of mobility of employment in that fishery.
- There may be overlap between crewmembers participating in fisheries on multiple permits. In other words, while it may take five crew per permit to harvest under five separate permits, these 25 possible crew positions could be filled by the same five people (or not) (McDowell, 2006).
- Individuals may be vessel owners (CFEC gear operators) in one fishery and deckhands in another (McDowell, 2006).
- There is a high turnover rate, especially among entry-level crewmembers. Some individuals have a strong commitment to fishing; they start as deckhands, stay in the fishing industry their

[12] On the other hand, crewmembers are reluctant to leave vessels that offer good jobs (DOLWD, 2006).

[13] Alaska fishermen do not necessarily participate in a full "suite" of fisheries over the course of a single year. Rather, they may "roll" in and out of fisheries over a multi-year cycle (McDowell Group, 2006).

whole working lives and eventually captain their own vessels (other committed fishermen make a career out of being a deckhand). However, most fishermen have a short-lived career; they briefly engage in fishing for the monetary reward, unique work experience or some other reason and then depart. Vessels often pick up additional crew who work for only a few days; for example, at the peak of a salmon run a vessel may need to add another crewmember or two on a temporary basis to maintain the quality of the fish (Maw, 2005). Moreover, the reduced financial rewards for crew in salmon fisheries have made it difficult to keep one crew for the entire season (Widmann, 2002).[14] Carothers and Sepez (2005) found that, of the 31 percent of ADF&G commercial fishing crewmember license holders during the 1993-2003 period for whom a unique identifier was available, the mean number of years that an individual held a license was 1.8 years. Only 20 percent held licenses for three or more years; and only 0.35 percent bought licenses in eight or more years.

- Some crewmembers may have reasons for preferring that their identity and work activity not be disclosed. In some fisheries a substantial proportion of crewmembers may be foreign nationals who are working aboard U.S. fishing vessels illegally (EnviroWatch, Inc., 2000; Ingles, 2004). Other crewmembers may wish to maintain a low profile because they have been avoiding paying income taxes or meeting other financial obligation (Ingles, 2004).[15] While the notion that the typical crewmember is someone "running from something" is undoubtedly a gross stereotype, one survey has shown that fishing is one of the easier jobs to obtain for individuals who have had problems with the law (Ingles, 2004).

[14] Widmann (2002) describes the current crew situation in Alaska's salmon fisheries as follows: "The era of returning professional fishing boats crews has come to an end. It seems like the only people available for most crews are young inexperienced people who are either college or high school students. Their school schedules often make them unavailable for parts of each fishing season. This makes it necessary for boat skippers to hire multiple crews if they want to fish entire seasons."

[15] The ADF&G matches each commercial fishing crewmember licensee against Child Support Enforcement's outstanding child support list. If the licensee is behind on child support payments, the license is null and void at the time of purchase, and the licensee is subject to criminal sanctions for participation in any commercial fishing crewmember activities.

4 Summary of Currently Employed Means to Estimate Crewmember Activity

This section summarizes recent efforts of the Alaska Department of Labor and Workforce Development (ADOLWD) and the National Marine Fisheries Service (NMFS) to estimate Alaska fish harvesting employment. It should be noted that this summary is not comprehensive, and looks only at the selected efforts of ADOLWD and NMFS. Other agencies and stakeholder groups have ongoing processes or have undertaken studies to estimate commercial fish harvesting employment. The study group heard repeatedly through key informant interviews a wide-spread acknowledgement that these studies have provided critical information to stakeholders, but also that the long-term costs of these repeated estimation projects must be greater than the costs of a more efficient system designed to provide needed data on a regular basis.

4.1 ADOLWD Crew Factor Estimation Process

During the past few years, ADOLWD has estimated the number of fish harvesting jobs in Alaska using a methodology similar to that developed by ADOLWD in earlier efforts; the results to date are reported in Olson and Robinson (2004) and Patton and Robinson (2006). The series of employment estimates goes back to 2000.

The ADOLWD employment calculations are based on the landings made by individual CFEC commercial fishing permit holders in Alaska's fisheries. For the purposes of the estimation method, the permit holders are considered employers, and their records of landings indicate employment activity by month in specific fisheries. The landing data information is primarily obtained from ADF&G fish ticket reporting. Because the records of landings do not specify the number of jobs and people involved in the fish harvesting, the ADOLWD used a "crew factor" methodology to estimate the average labor needed to fish specific permits, given their associated region, species and gear type. For example the crew factor for a Bristol Bay Drift Gillnet permit might be 2.5, while the crew factor for Bering Sea King Crab permit might be 6.7. The ADOLWD crew factors include the permit holder.

ADOLWD developed crew factors based on information from earlier, similar studies, conversations with fishermen and processors, and from staff in ADOLWD and other departments with broad knowledge of fisheries. In addition, a stratified sample of 5,000 permit holders in 117 different fisheries was surveyed. Just over 1,000 permit holders replied and this information was also used in the development of the crew factors. The original survey has evolved into an on-going survey process that will regularly update crew factor estimates for all Alaska fishery types.

In ADOLWD's process for estimating monthly employment, the crew factor indicated by the permit is applied when a permit holder makes at least one landing in a month. The crew factor is only applied once no matter how many landings are made per month. The total employment in each fishery is then calculated by multiplying the number of active permits by crew factor. When estimating total employment over all fisheries, ADOLWD's methodology attempts to reduce double counting that could occur if someone has several permits and makes landings on more than one of them. In these cases, the permit with the greatest associated harvest value determines which crew factor is activated for that particular permit holder.

ADOLWD assigns crewmember jobs to the place of work rather than the employee's residence. Most of the permits issued have a geographic designation to where specific species can be harvested and with what type of gear. For example the Area M seine salmon fishery takes place off the coast of the Aleutians East Borough, and thus the jobs generated in the Area M seine salmon fishery are assigned

to the Aleutians East Borough. For permits that allow for harvesting anywhere in the state, ADOLWD assigns employment using a special harvest area code that denotes that general area in which fish were harvested.

ADOLWD also estimates annual employment fish harvesting operations. These estimates annualize crew factors based on the number of months a given permit is active. Thus, if a permit is active all 12 months of the year, the crew factor for that permit is multiplied by 1. Alternatively, if a permit is active for six months, the crew factor is multiplied by 0.5, and so forth. As with total monthly estimates, the permit with the greatest associated value is used for permit holders with landings on multiple permits in any month.

Patton and Robinson (2006) list two reasons why ADOLWD's estimates might undercount fishing employment. First, the time spent for preparations and for completing operations at the end of the season, until the permit holder makes a landing, is not counted. To address this limitation, ADOLWD has started surveying permit holders to find out how much time is spent on preparations in each fishery. This time will be included in future estimates. Secondly, when a permit holder makes landings under two different permits in one month, only the permit with the highest value catch is assigned employment in that month. The assumption is that crewmembers who work for the same permit holders and fish different fisheries in the same month are analogous to employees who perform different duties for one employer during a month. This assumption ignores the fact that some permit holders may hire different crewmembers to fish their different permits. Since crewmembers are not specifically identified in the fish tickets that record landing data, turnover of this type can't be captured.

Another limitation of the past ADOLWD fishing employment estimates is that they do not provide insight into the residency of the job holders; as noted above, jobs are counted by place of work and the focus is on the number of workers employed during a given time period rather than the identity or characteristics of the workers themselves (Olson and Robinson, 2004). This residency limitation is also common within other estimation efforts. For example, in work prepared by Northern Economics, Inc., the analyses often assume that permit holders from rural Alaska hire crewmembers from the same community as the permit holder.

We note that ADOLWD has enacted changes in its estimation program over the past year including defining the permit as the employer rather than the permit holder. Thus, if a permit holder makes landings under two different permits in the same calendar month, each landing will generate a set of jobs. Previously ADOLWD determined which landing generated the highest earnings and counted a set of jobs (i.e., applied the crew factor) only for that one.

4.2 Efforts by NMFS to Collect Employment Data

In the last several years NMFS has initiated several other primary data collection efforts that provide more information on crew labor efforts. However, none of these systems provide information across all of Alaska's fisheries. That said, it is possible that an approach to solving some of the issues with the current statewide reporting system could be found within these efforts:

- Bering Sea and Aleutian Islands and Gulf of Alaska Groundfish Catch Accounting System
- Interagency Electronic Reporting System
- Bering Sea and Aleutian Islands Crab Fisheries Economic Data Report
- Commercial Fisheries Employment Survey
- Regional Economic Data Collection Program for Southwest Alaska

The employment data collection and estimation processes included in these programs are discussed in the sections below.

4.2.1 Bering Sea and Aleutian Islands and Gulf of Alaska Groundfish Catch Accounting System

NMFS recordkeeping and reporting requirements require reports from vessels participating in groundfish fisheries in the U.S. Exclusive Economic Zone (EEZ) off Alaska (50 C.F.R. 679.5). Catcher vessels with an overall length of greater than 60 feet must complete a Groundfish Daily Fishing Logbook (DFL), while catcher/processors and motherships receiving groundfish must complete a Daily Cumulative Production Logbook (DCPL). Data required to be reported by vessel owners or operators include the number of crew, excluding certified observer(s), on the last day of the weekly reporting period in a mothership or catcher/processor DCPL, and in the DFL on the last day of a trip for a catcher vessel.[16]

NMFS currently operates an electronic reporting (ER) system for collection of weekly production reports (which summarize logbook data) from the groundfish fisheries (NMFS Alaska Regional Office, 2006b). The ER system allows catcher/processors and motherships to submit weekly production reports via e-mail or direct from a modem from their computer on board.[17] The benefits of the ER system include improved data quality, automated processing of data, improved process for correcting or updating information, and more timely data available to fishery managers. The ER system is gradually being replaced by the Interagency Electronic Reporting System described below. The switch between data reporting systems will become mandatory sometime in 2007 (Ackley, 2006).

4.2.2 Interagency Electronic Reporting System

Recently, an electronic data reporting system, called the Interagency Electronic Reporting System or eLandings, was developed through a collaborative effort by NMFS, ADF&G and the International Pacific Halibut Commission, with funding from the Pacific States Marine Fisheries Commission (NMFS Alaska Regional Office, 2006c; State of Alaska, 2006). The goal of the joint effort is to develop a single, Internet-based reporting system for Alaska fisheries. The eLandings system is designed to eliminate reporting duplication and increase efficiency for harvesters, processors and fishery managers. Using the system requires a computer and printer and an Internet connection with e-mail. In addition, users must request authorization and reserve a particular UserID and password. The system allows users to submit their landing report data (i.e. fish tickets and other required processing reports) to all mandated agencies through a series of eLandings Web pages.

The eLandings system was first used in 2005 in the Aleutian Islands' Western and Eastern golden king crab fisheries. Currently, eLandings is used to report landings and/or production data for the IFQ/CDQ crab and Community of Adak golden king crab, halibut and sablefish IFQ and state-wide groundfish fisheries. In the future, the system will be expanded to include landings and production data reports for shellfish, salmon, herring and other Alaska fisheries.

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[16] In general, NMFS does not enter logbook data submitted by harvesters and processors into electronic databases. Logbook data are available in hard-copy format and are often used in enforcement cases or in specialized in-house research projects.

[17] The ER system consists of two principal components (NMFS Alaska Regional Office, 2006b). The ER Client software is used by personnel on a vessel to enter data and transmit data to NMFS. The ER Host software runs at the NMFS Alaska Regional Office in Juneau. The ER Host system receives and logs transmitted files, validates the data, loads the data into an Oracle database, and sends a return receipt report to the vessel or processing plant informing them of the status of their submission.

Data reported in the eLandings reporting process include ADF&G fish ticket record information,[18] IFQ fisher/processor quota harvest, and processor production information. In addition, reported data include the total number of crew (including skippers) on-board the vessel.

4.2.3 Bering Sea and Aleutian Islands Crab Fisheries Economic Data Report

Beginning in the August 2005, NMFS is requiring an annual Economic Data Report (EDR) from any owner or leaseholder of a vessel that harvested or processed crab in the Bering Sea and Aleutian Islands (BSAI) crab fisheries managed under the IFQ/IPQ program (50 C.F.R. 680). The purpose of the data collection program is to collect the employment, cost and sales data necessary to adequately examine how vessel and processing plants are affected by the BSAI crab rationalization program. The following information is recorded for crew who harvest crab and whose pay is based primarily on their harvesting work: 1) the number of crew aboard the vessel (excluding captain) who provided crab harvesting labor; 2) the total payment made to crew (excluding the captain) for their crab harvesting labor; and 3) the total payment made to the captain for his services. The total payment to the crew and captain is the amount actually paid, not the earnings before shared expenses (such as fuel, bait, or food and provisions) are deducted. Any payments to the captain or crew for their IFQ are excluded.

In addition, the report records the ADF&G commercial fishing crewmember license number or CFEC commercial fishing permit number for each vessel employee participating in any or all BSAI crab fisheries and lists the employee's location (city/state) of residence. For employees that do not have ADF&G crewmember licenses or CFEC fishing permits (processing crew for example), the report records the location (city/state/country) of residence and the number of employees that are from each residential location.

All data are collected and held by the Pacific States Marine Fisheries Commission (PSMFC). PSMFC abides by all statutory and regulatory data confidentiality requirements, and only releases the data to NMFS, North Pacific Fishery Management Council staff and any other authorized users in a "blind" format. Specifically, all identifiers associated with data submitters are eliminated and replaced with fictitious vessel and processor identifiers for purposes of analyses. Participation in the data collection program is mandatory for all participants in the BSAI crab fisheries. Should participants fail to submit the EDR, NMFS is authorized to withhold issuance or transfer of IPQ or IFQ.

4.2.4 Commercial Fisheries Employment Survey

In 2003, the national offices of NMFS developed the Commercial Fisheries Employment Survey, which is designed to collect employment data for use in descriptive analyses of the economic significance of the commercial fish harvesting sector from all US states and territories (Office of Management and Budget, 2003). The voluntary mail survey was initially fielded in spring 2004 and ran through the summer of that year (Curtis, 2006). Due to a low response rate NMFS opted to conduct a phone survey to detect potential non-response bias (i.e., bias introduced because those

[18] ADF&G fish tickets are filled out by the processor for each vessel that delivers fish to that processor. Data reported on the fish ticket include ADF&G vessel number, CFEC commercial fishing permit information, date fishing began, date landed, gear type, ADF&G statistical area where fish were harvested, landed weight (in pounds) and condition of the catch by species, weight (in pounds) of discards at sea and at the dock, number and type of prohibited species discarded at sea, price paid/received per pound for the recorded weight, and monetary amount paid/received. A fish ticket is considered a legal document and requires the signature of the vessel captain or operator and the buyer.

who responded were systematically different from those who did not). The phone survey also had the effect of bumping up the response rate significantly (the final overall response rate was 50 percent).

The survey sampled from the entire population of U.S. commercial fishing vessels (with the exception of Puerto Rico and the U.S. Virgin Islands). The potential respondent universe was any commercial fishing vessel that 1) holds a federal or state permit or license; and 2) participated in fishing activity in either state or federal waters in 2003.

The mail-out questionnaire asked each vessel owner or captain to report, for the calendar year 2003, the average number of crew taken on a trip and the number of days fished in each 2-month period in each fishery. This will allow for the estimation of: the total number of crewmembers employed (annually and by month) in all U.S. commercial fisheries, the total number of crewmembers employed by fishery (annually and by month), and the total number of days of employment by fishery and across all fisheries. Depending on the other information available regarding each vessel, it should also be possible to provide estimates of full- and part-time employment by state or by vessel characteristics such as gear type. The results of the survey are still being analyzed (Curtis, 2006).

One of the major limitations of the survey is that it will only provide a one-year snapshot of the employment situation in U.S. commercial fisheries. Repeated surveys would allow one to examine evolving trends in commercial fishing employment, but high costs may preclude the frequent administration of surveys (the proposed budget for the contract to conduct the survey in FY04 was $175,000). Another limitation with the NMFS survey and other voluntary surveys is alluded to above—the potential for a high level of non-response. According to Curtis (2006), NMFS is currently reviewing the accuracy of the survey results given the early non-response problem.

4.2.5 Regional Economic Data Collection Program for Southwest Alaska

NMFS is proposing to undertake a survey effort in 2007 to collect data required for a regional economic analysis associated with Southwest Alaska fisheries (71 FR 53668, September 12, 2006). The one-time mail-out survey will request data on employment and labor income from 2,200 vessel owners whose boats delivered fish to processors in Southwest Alaska. NMFS has hired contractors at the University of Alaska Fairbanks to conduct the data collection project (NMFS Alaska Regional Office, 2006d). Since the contractors are concerned about the low response rate of a voluntary survey, they will use an approach slightly different from those used by previous data collection studies. First, for gathering information on employment and earnings, they will rely on the survey of vessel owners. Second, for gathering information on costs of intermediate inputs used on harvesting vessels, they will survey the suppliers of the inputs rather than the vessels owners. This approach will allow the number of questions on the voluntary survey to be minimized, which will help to increase the response rate.

5 Key Informant Interviews

The project conducted a series of key informant interviews to determine the breadth and magnitude of issues associated with seafood harvesting labor data issues. The interviews targeted researchers, municipal employees, fishermen, state and federal employees, and some private enterprises. The interviews revealed that issues with associated with seafood harvesting labor data are common, but generally limited to public sector entities, researchers, and permit holders and crew involved in fisheries. Private sector firms are less affected by the lack of data; particularly outside the immediate harvesting sectors. The interviews also revealed the lack of data is a long-term annoyance more likely to delay or reduce the efficiency of programs than actually prevent programs or result in their cancellation.

5.1 Common Issues Arising from Current Data Sources

The study found that the most common issues associated with the current seafood labor harvesting data were trouble meeting grant and program requirements. Almost all of the key informant interviewees mentioned problems with grant applications and the ability to accurately describe their own personal needs, the needs of their community, or simply the composition of their community. One interviewee described the lack of data as "a multi-edge sword that cuts in many directions and in very subtle ways." These sentiments were echoed during the work group session described in Section 6. The following areas describe specific programs or issues mentioned by multiple interviewees.

5.1.1 Denali Commission Distressed Communities Criteria

Several key informant interviewees said that the lack of data on crewmembers involved in seafood harvesting hampered the ability of their communities to receive funding under the Denali Commission's Distressed Communities Criteria program. In 2000, the Denali Commission adopted the Distressed Community Criteria to ensure that qualified communities would receive federal aide. This adoption provided standard qualification requirements to ascertain how funding would be distributed to each community. The Commission developed the following criteria to determine community eligibility:

- Per capita market income no greater than 67 percent of the U.S. average
- 150 percent of the U.S. average or greater of poverty rate
- 3 year unemployment rate at 150 percent of the U.S. average or greater

Additionally, Congress mandates that eligible communities are not to receive more than 80 percent of funding for the construction of health facilities. Communities that do not qualify are not to receive funding of more than 50 percent. The interviewees indicated that the fact that seafood harvesting crew might not be included in traditional unemployment rate calculations hampered the ability of harvesting-dependent communities to qualify for these programs (Currier 2006; McClure 2006). However, interviewees also indicated that recent changes to the program had removed some of these traditional barriers.

5.1.2 Development of Comprehensive Plans

Community Comprehensive Plans are often the basis for long-term development and planning decisions in many communities. In many instances, they also serve as reference documents for citizens and supporting materials for federal and state grant applications. Communities relying on the seafood harvesting sector for employment are unable to accurately show how important that sector is to their community because current data do not allow them to describe fisheries involvement by community members that crew these boats (Bergey, 2006). The communities can include information on which fisheries are most important to commercial fishing permit holders in their communities, but their descriptions of crew involvement must rely on anecdotal evidence, their own knowledge of the communities, or assumptions that crew are involved in the same. This asymmetry of information means the comprehensive plans are less useful in planning for the needs of crewmembers and their involvement in the community than they are in planning for the needs of sectors where more complete employment information is available.

5.1.3 Federal Trade Adjustment Assistance Programs

The study heard repeatedly from key informant interviewees that one of the major issues with the current data is the inability of companies or individuals involved in seafood harvesting to prove they've been harmed by shifts in trade. For the seafood industry, labor data are the primary means of qualifying a company or individual for the federal programs managed by the Northwest Trade Adjustment Assistance Center (TAAC) and the U.S. Department of Labor. In order for companies to qualify for the program they have to show a decline in employment, while individuals have to prove they were involved in the fishery. Clearing this hurdle can be difficult for crewmembers because as independent contractors, they are not recorded in state employment figures and their involvement in specific fisheries is not recorded. In most industries the sector itself provides proof that the individual worked in that sector, but in fisheries clients have to supply TAACs with their own proof because the centers do not have a state source (Kuhar, 2006). Hence, the biggest cost due to lack of good data is paid by potential TAAC clients who are unable to qualify for the trade adjustment assistance programs even though they participated in fisheries.

5.1.4 Hospital Reimbursement and Grants

Conversations with Brenda Akelkok of Bristol Bay Area Health Corporation indicated that Bristol Bay area health providers face challenges writing grants because they can't numerically prove that their populations are in need of services. For example, the lack of fishery-specific counts on the number of crewmembers makes it nearly impossible to prove to granting agencies that the demand for services swells during specific fishing seasons and that the population influx is composed of individuals who might qualify for reduced-cost services. Thus, the care providers find it difficult not only to apply for grants which might expand services or improve the quality of existing services, but also to find full reimbursement for services they are currently providing.

5.1.5 Suggested Solutions from Key Informant Interviewees

Some key informants suggested solutions that became the basis for the initial options provided to work group participants. In general, key informants told the study that the system that would serve them best would be one that would allow them access to reliable counts of crewmembers by fishery and community. However, these same interviewees indicated that they did not think this would happen until the governor and the legislature got behind the project. As one interviewee stated, "This issue is the number one unmet priority for understanding the seafood economy, but the topic isn't

sexy enough to get the attention it deserves." Interviewees stated that it's difficult to attract the attention of decision makers because they don't understand the depth of the problem or the amount of work needed to provide them with the little information that is currently available.

Some interviewees suggested regional or partial solutions to the issues associated with tracking seafood harvesting labor. One interviewee suggested a regional solution for the Bristol Bay sockeye fishery. The suggestion included requiring that permit holders declare which crew would be fishing with them for each opening in the fishery. The declaration would be made by recording the crew license number on the permit district registration cards announcing which district the permit holder would fish in during the next opening. This solution would allow researchers to determine how many crewmembers fished in the fishery and where they came from. It would not solve issues beyond the fishery or allow the direct calculation of income derived from the fishery. Other interviewees suggested tackling the problem in a phased approach by expanding the federal eLandings system.

6 Work Group Results

A key component of SWAMC's Seafood Harvesting Labor Data initiative was the work group session that brought together agency personnel, social scientists, community leaders and other stakeholders including crew-members, vessel owners, permit holders, and processors. The primary goal of the work group session was to open a dialog that would examine existing and proposed systems that deal with fishing crew data. The work group session was held on the Southeast Campus of the University of Alaska in Juneau on November 13 and 14, 2006. A total of 20 persons (as listed in Table 2) attended the work group session. SWAMC sent each attendee a primer providing an overview of the existing situation and potential options to improve crewmember data. The primer is included as Appendix B – Work Group Primer.

Table 2 Work group session Attendees [1]

Name	Organization	Organization Type
Wanetta Ayers	Southwest Alaska Municipal Conference	Communities
Linda Freed	City of Kodiak	Communities
Debora King	Kodiak Chamber of Commerce	Communities
Chuck McCallum	Lake and Peninsula Borough	Communities
Laura Gilman	Aleutian Pribilof Island Community Development Association	Communities
Geron Bruce	Alaska Dept. of Fish and Game	State Agency
Herman Savikko	Alaska Dept. of Fish and Game	State Agency
Gail Smith	Alaska Dept. of Fish and Game	State Agency
Rachel Baker	Alaska Dept. of Fish and Game	State Agency
Kurt Schelle	Commercial Fishing Entry Commission	State Agency
Stefanie Moreland	Commercial Fishing Entry Commission	State Agency
Neal Gilbertson	Alaska Dept. of Labor and Workforce Development	State Agency
Dan Robinson	Alaska Dept. of Labor and Workforce Development	State Agency
Andy Wink	Alaska Dept. of Labor and Workforce Development	State Agency
Glenn Haight	Alaska Dept. of Commerce and Community Economic Development	State Agency
Bob Ryznar	Alaska Fisheries Information Network	Federal Agency
Jeff Hartman	NOAA Fisheries--Alaska Region	Federal Agency
Scott Miller	NOAA Fisheries--Alaska Region	Federal Agency
Stephanie Madsen	North Pacific Fishery Management Council and Pacific Seafood Processors Association	Federal Agency/ Processors
Tim Henkel [2]	Deep Sea Fishermen's Union	Crewmembers
Steve Branson	Crewmen's Association	Crewmembers
Keith Criddle	University of Alaska Fairbanks—Southeast	Research
Gunnar Knapp [3]	Institute of Social and Economic Research	Research
Jon Isaacs [3]	URS, Inc	Research
Jonathan King [3]	Northern Economics	Research
Marcus Hartley [3]	Northern Economics	Research

[1]In addition the attendees listed above, Jennifer Sepez (NOAA Fisheries), Mark Fina (NPFMC), and Joe Sullivan (Mundt MacGregor) all attempted to attend, but were unable to participate because of inclement weather conditions in Juneau.
[2]Attended via telephone
[3]Member of the consulting team

6.1 Agenda

The work group session was moderated by Jon Isaacs of URS and consisted of five basic sections:

1) Presentation by Agencies describing the data collection and estimation processes;
2) Presentations by data users describing their data needs and some of the problems they face when trying to use existing data;
3) Presentation of potential options that could improve the data that are collected;
4) A discussion of the pro's and con's of the various options;
5) A discussion of the steps necessary to keep the initiative moving forward;

The remainder of this summary contains a separate section for each agenda item

6.2 Agency Presentations

The work group session began with presentations regarding existing and planned data collection systems and methods used to estimate crewmembers in Alaska's fishing industry. Presentations were made by Geron Bruce and Gail Smith of ADF&G, who provided summaries of the commercial crew licensing system, the existing paper fish ticket system, and the soon to be implemented electronic fish ticket system, and Neal Gilbertson of ADOLWD, who discussed the current means of estimating fish harvesting crew numbers. The presentation summaries that follow were developed from notes taken by study team members. While the team has made every effort to accurately summarize the discussions, they were not transcribed verbatim and are paraphrased from the original language.

6.2.1 Geron Bruce of ADF&G on Crew Licenses and the Existing Fish ticket System

Geron Bruce of ADF&G provided the presentation that described the current systems for collecting crewmember licenses and the existing paper-based fish ticket system for collecting landing information.

According to Mr. Bruce, commercial crew licenses are assigned using the same system that licenses recreational fishing and hunting. The system, which annually issues 2.6 million annual licenses, uses approximately 230 vendors, most of which are located in Alaska.

In 2005 Commercial Crew Licenses generated $1.9 Million in license fees. Revenues from Commercial Crew Licenses are distributed to the ADF&G Division of Commercial Fisheries (51 percent or approximately $970,000) to license vendors (10 percent or $190,000) and to the Fishermen's Fund (39 percent or approximately $740,000).[19] While the revenue to both the state, the Fishermen's Fund and to vendors is important, Mr. Bruce indicated that crew licenses were not used by the state to track fishing activity of crewmembers. He did however indicate that crewmembers are often asked to show their licenses when the fishing vessel is being inspected by state or federal enforcement personnel.

[19] The Fishermen's Fund (administered by ADOLWD provides for the care of Alaska licensed commercial fishermen who have been injured while fishing in Alaska. See http://www.labor.state.ak.us/wc/ffund.htm for more information on the Fishermen's Fund

In general, the license application form is very similar to that used for recreational fishing and hunting. It is a paper form that is filled out in triplicate by the vendors.[20] The crewmember receives a paper copy of the license and one copy goes to ADF&G and the other is retained by the vendor. ADFG seasonal staff enters the data from the forms into the computerized database on an annual basis.

Mr. Bruce stressed that it is important that crewmember licenses are widely and quickly available in nearly any location where commercial fishing is likely to take place. He also stressed the importance to vendors of revenue from license sales and the importance that ADFG places on having vendors in most locations. Finally, Mr. Bruce noted the expense of converting to an alternative system.

Mr. Bruce also provided the work group session an overview of the current paper-based fish ticket system that serves as the basis tracking shore-based commercial fish landings throughout the state. Mr. Bruce indicated that in 2005, 213,000 Fish tickets were received from 466 different processors. The Fish ticket system has an annual cost of approximately $350,000.

Each processor that completes an "intent to operate" application (the equivalent of a license for processors), they are issued blank fish tickets for use in the upcoming season. Like the crew licenses, the fish tickets are paper forms with several carbon copy duplicates attached. When the Fish ticket is issued, a copy is given to the permit holder, the processor keeps a copy and others are sent to ADF&G and to other management agencies (e.g. the International Pacific Halibut Commission or IPHC, and the National Marine Fisheries Service or NMFS).

The fish tickets indicate the ADF&G Vessel Identification number, the Processor Identification number, the Permit Holder Identification number and the type of permit on which the landing is made. The Fish tickets also list the pounds of each species landed along with the fishing location, the type of gear used, the date of the landing, and other important data. The Fish ticket currently does not have a place that could accommodate information on crewmembers.

Finally Mr. Bruce asserted that confidentiality is a key factor in gaining the participation of permit holders and processors in the Fish ticket System—the state guarantees confidentiality of records to enhance the cooperation of permit holders and processors in providing landing information.

6.2.2 Gail Smith of ADF&G on the eLandings System

Ms. Gail Smith provided the work group session with a summary of the eLandings System, which is more formally known as the Inter-agency Electronic Reporting System or IERS. Development of IERS began in 2000 in a cooperative effort by ADF&G, NMFS and IPHC. To date the effort has cost these agencies $1.6 million, but eventually will contain all of the data that is currently going into the FT and IFQ monitoring systems.

Ms. Smith pointed out that rationalization of the sablefish, halibut, crab fisheries has been the primary impetus for development of the system. In 2007 landings in the sablefish, halibut and rationalized crab fisheries in the Bering Sea and Aleutian Islands will be required to use the IERS. [21] For the rationalized fisheries, the IERS will completely replace fish tickets. In addition, it may be voluntarily used for other fisheries, and eventually according to Ms. Smith it is hoped the IERS will be used in nearly every fishery in the state.

[20] Though not mentioned in the presentation, it should be noted that in recent years it is possible to obtain a Commercial Crew Licenses (as well as recreational fishing and hunting licenses) over the Internet. No identification or verification is required, and while applicants are mailed a license, a temporary license can be printed and used immediately.

[21] Additional information on IERS (eLandings) can be found at https://elandings.alaska.gov.

Ms. Smith indicated that the IERS does ask permit holders to submit information on the number of fishing crewmembers (as opposed to processing crew) and on the number of observers on board. Ms. Smith also indicated that there are no current plans to ask that fishing crewmembers be identified using Alaska Commercial Crew License numbers.

6.2.3 Neil Gilbertson of ADOLWD on the Estimation of Alaska Fishing Crew Jobs

Mr. Gilbertson provided the work group session with a summary of the process used by ADOLWD to estimate the number of fishing crew jobs in Alaska by month. Mr. Gilbertson began the presentation by contrasting that process with the process used to estimate wage and salary employment for most other job types in Alaska.

In 1960, the Employment Security (ES) system began collecting employment information across the US with each state's labor department responsible to produce estimates for their particular state. The primary means to provide those estimates is through the ES-202 form that is required to be submitted quarterly by all employers with 3 or more employees.[22] Because fishing crewmembers are generally independent contactors and not wage and salary employees of the permit holder or vessel owner, the ES-202 form does not capture fish harvesting employment.

Mr. Gilbertson also pointed out that the information reported on the ES-202 is workplace based and therefore doesn't specifically indicate the residence of the employee. In other words, a system for crewmembers that actually reported residence would be a step beyond what is required currently for wage and salary employees. The ES-202 forms requires that employers report the individual SSNs of all employees as of the 12th of each month, and this allows ADOLWD, in combination with Permanent Fund Application information, to estimate resident and non-resident employment. In general however, ADOLWD does not use the SSNs in their standard employment estimates.[23]

Because of the importance of the fishing to the Alaska economy, ADOLWD has, in recent years, been making estimates of fishing crew employment that are similar to the extent possible to what they produce for other industries from the ES-202s.

Mr. Gilbertson described the ADOLWD process for estimating fishing employment. First they sort individual fish tickets (obtained from ADF&G) into discrete fisheries by month and permit holder. Then they assign a crew factor to each fishery and multiply that factor by each permit fished during the month. ADOLWD estimates crew factors in each fishery based on a regular survey of permit holders. ADOLWD assigns regional geographic indicators based on the location of the fishery. For example, estimates of crewmembers in the Bristol Bay Salmon fishery are assigned to the Southwest Alaska Region. For statewide fisheries, ADOLWD uses geographic information submitted in the fish ticket indicating where the fish were caught and were they were landed.

Mr. Gilbertson went on to discuss the Pros and Cons of the ADOLWD system, and pointed out that the estimates are good for total employment counts for each fishery by month. He also indicated that the new IERS provides actual data that could replace ADOLWD's estimates. On the Con side, Mr. Gilbertson acknowledged that the systems does not track data on individuals, does not provide information on the residence of crewmembers, does not include estimates of the actual number of days worked (either on the grounds or time spent on shore working on the boat and gear). Finally, Mr. Gilbertson indicated that ADOLWD recognizes that estimating crew numbers by each permit fished in

[22] The specific information on requested on the ES-202 is seen at http://www.bls.gov/cew/cewover.htm

[23] Some participants noted that in theory ADOLWD could take a systematic look at SSNs in the ES-202 form and cross check with available SSN information in commercial crew licenses and permit databases to examine the question of whether fishers are working in industries other than in the fishing industry.

a month would count an individual multiple times if they worked in different fisheries during a single month.

6.3 User Presentations

The presentations on data collection by agency personnel were followed by presentations of three users of fishery data. Linda Freed and Debra King, both from Kodiak, discussed the importance of having reliable fisheries employment data in order to anticipate and respond to changes in fishery regulations. This was followed by a discussion led by Gunnar Knapp of the Institute of Social and Economic Research on the importance of employment for fisheries research.

6.3.1 Linda Freed City Manager of Kodiak on Importance of Employment Data to Civic Leaders

Linda Freed discussed the fact that Kodiak is one of the largest fishing communities in the country, but that it is impossible to say with any certainty how many residents actually participate in the fisheries. This became especially apparent with the rationalization of the Bering Sea Crab fisheries. Everyone is saying that the change in crab fisheries has had a significant impact, but all evidence of impact on crewmembers is anecdotal—there are no available data that document how crewmembers were affected.

The community is even more concerned because the City of Kodiak knows that the Bering Sea Crab fishery was not the largest sector of Kodiak's fishing economy, certainly nothing like the Gulf of Alaska groundfish fishery. The NPFMC is looking at rationalizing this fishery as well, and residents and city officials are very concerned there could be a significant impact. Unfortunately, there are no data on which to base an analysis.

The City of Kodiak believes it is incumbent upon the federal and state governments to have data that allow communities to be informed and to be involved in the process. They also believe that the fishing industry is a significant component of the economy, but there is a large number of people (the crewmembers) that are involved in the fishery and in the community for whom they can't document their involvement.

6.3.2 Deborah King of the Kodiak Chamber of Commerce on their use of Employment Data

The Kodiak Chamber of Commerce publishes a monthly newsletter on our labor force that reports employment, wages and salaries, based on the information that comes from ADOLWD. However, for the fishing industry, which is the City's most important industry, the report has nothing but anecdotal information and informed guesses. Ms. King stated that sound, basic data on fish harvesting employment and income are needed and those data needs to be credible and factual.

6.3.3 Gunnar Knapp of UAA's Institute of Social and Economic Research

Dr. Gunnar Knapp provided the work groups a presentation that we have divided into two parts: Part 1 focuses on the challenges for research created by the lack of fishing employment data; and Part 2 discusses the importance of employment data for fisheries research. The summaries provided here are paraphrased from the original presentations.

6.3.3.1 The Challenges for Research Created by the Lack of Fishing Employment Data

As an example of the challenges for research created by the absence of fishing employment data, Gunnar Knapp of ISER discussed problems he encountered in a study for the City and Borough of Kodiak on *Economic Impacts of BSAI Crab Rationalization on Kodiak Fishing Employment and Earnings and Kodiak Businesses: a Preliminary Analysis* (Knapp 2006).

This study examined how crab rationalization affected employment of Kodiak residents—a question of great interest and importance to Kodiak as well as many other coastal communities. Because no data are available on fishing employment by fishery and community, Dr. Knapp could only develop an approximate answer to this basic question, which is central to several major fisheries policy issues facing Alaska.

Clearly, the consolidation resulting from rationalization caused a major decline in the number of individuals participating in Bering Sea crab fisheries, there was no reliable basis for estimating how many of the crew working on Bering Sea crab boats were from Kodiak—either before or after rationalization. In the table from the report reprinted below, Dr. Knapp summarized the "quality of information on which to base assumptions" about jobs held by Kodiak residents as "low."

Table 3 Steps in Estimating Changes in Kodiak Fishing Jobs and Days Worked

Step	Key Assumptions	Quality of Information on Which to Base Assumptions
Estimate total changes in jobs on Kodiak boats and other boats	Average jobs per boat before and after rationalization	Medium: No data are available on average crew size before or after rationalization, but anecdotal evidence is fairly consistent. It is uncertain whether average crew sizes have changed.
Estimate change in jobs for Kodiak residents	Percentage of jobs held by Kodiak residents on "Kodiak Boats" and on non-Kodiak boats	Low: We don't have any reliable data on where crew live. We do have data, however, on where crab permit holders (usually captains) live.
Estimate changes in days worked	Days worked per crab fishing job	Low: Available ADF&G data on "average fishing days" are preliminary. No data are available on average days spent in transit, in port between landings, or working in Kodiak before and after the season.

For his estimates, Dr. Knapp assumed that the percentage of crew who were Kodiak residents was the same as the percentage of permit-holders on "Kodiak Boats" who were Kodiak residents—but he had no way of knowing whether this was a valid assumption.

Table 4 Residence of Bristol Bay Red King Crab Fishery Permit Holders, 2004/05

		Kodiak Boats	Other Boats	Total
Permit holder residence	Kodiak	35	4	39
	Other Communities	19	191	210
	Unknown		2	2
	Total	54	197	251
% Kodiak residents		65%	2%	16%

Source: Based on permit holder residency reported in CFEC Permit Holder Database 2004

Based on this assumption, he estimated that rationalization resulted in a loss of about 104 jobs for Kodiak residents in the Bristol Bay Red King Crab fishery and about 59 jobs in the Bering Sea Snow Crab fishery. But he noted that "the actual number could have been significantly higher or lower, depending on whether boats tended to hire people from the same town as the permit holder."

As another example, Dr. Knapp cited research he had done about economic effects of the Chignik Co-op. The Co-op resulted in a decline of about 40 or 50 (half or more) in the number of boats fishing. Clearly, there was a significant decline in the total number of people working in this fishery. But it was very unclear the extent to which the Co-op affected crew jobs for local Chignik residents, because no data were available on the extent to which crew jobs in the Chignik fishery were held by local residents.

In talking about this politically charged issue—as occurs with many issues in Alaska—people with different opinions offered widely varying assessments of local employment effects. Co-op opponents told Dr. Knapp that the Co-op had caused economic and social stress because local people lost crew jobs. In contrast, Co-op supporters told Dr. Knapp that any local residents who wanted a crew job could get one—and that before and during the Co-op they had to hire crew from outside the region because they couldn't find local people who wanted to crew. Without an objective data source, there was no way for Dr. Knapp to determine which of these perspectives about this important issue was closer to the truth.

6.3.3.2 Gunnar Knapp of ISER on the Importance of Employment Data for Fisheries Research

In order to think clearly about options for improving fishing employment data, it is important to have a clear understanding of the different ways in which fishing employment data are used or might be used if better data were available. One of the most important of these uses is for research.

A wide variety of fisheries policy research involves analyzing the importance of commercial fisheries—the economic and social benefits and impacts of fisheries—and/or how these benefits and impacts might be affected by different policies. Measuring the economic and social benefits and impacts of fisheries requires knowing more than how many fish are caught, or the value of the fish that are caught. It requires employment data: information about the people that are involved in catching fish; how many people participate in the fisheries; how much time they spend fishing; and what they earn.

6.3.3.3 The Range of Research Questions that could be Answered with Better Employment Data

The text box below describes three general types of research questions that arise frequently, and that can't be fully answered without fishing employment data.

General Fisheries-Related Research Questions That Arise Frequently and That Can't be Fully Answered Without Fishing Employment Data

1) **How important is commercial fishing? What are the economic and social benefits and impacts of commercial fisheries?**
   a) How economically important is commercial fishing relative to other industries?
   b) How is the economic importance of commercial fishing changing over time?
   c) How is the economy (including commercial fishing) changing over time?

   d) For the nation
   e) For Alaska
   f) For specific regions of Alaska
   g) For specific Alaska communities

2) **What have been or would be the effects of changes in fisheries on the economic and social impacts and benefits of commercial fishing?**
   a) Effects of changes in fish prices
   b) Effects of changes in fish harvests
   c) Effects of changes in fisheries management

   d) Effects on the nation
   e) Effects on Alaska
   f) Effects of specific regions of Alaska
   g) Effects on specific Alaska communities

3) **What would be the effects of non-fishing related economic developments or policies on the economic and social impacts and benefits of commercial fishing?**
   a) Effects of offshore oil and gas development
   b) Effects of mines
   c) Effects of road development

   d) Effects on the nation
   e) Effects on Alaska
   f) Effects of specific regions of Alaska
   g) Effects on specific Alaska communities

The box below provides are specific examples of each type of question described above.

Examples of Research Questions of Current Interest That Can't be Fully Answered Without Fishing Employment Data

1) **How important is commercial fishing?**

Example Studies: (The following are real and/or hypothetical studies.)

a) *What are the relative economic contributions of commercial and sport fishing—and what would be the implications of changes in allocations between commercial and sport fisheries?*

b) *Is fishing harvesting employment in the Lake and Peninsula Borough large enough to merit a training grant requested of the US Economic Development Administration?*

c) *Is the number of persons directly affected by Salmon Disaster in the Bristol Bay Region in sufficiently large to merit the disaster relief funds proposed, or should those funds be redirected to relieve Midwest flood victims.*

2) **What have been or would be the effects of changes in fisheries on the economic impacts and benefits of commercial fishing?**

Example Studies: (The following are real and/or hypothetical studies.)

a) *What were the effects of crab rationalization on Alaska coastal communities? What might be the economic effects of proposed new rationalization programs?*

b) *How many individual crewmembers have 150 days of participation in Alaska fisheries in the last 5 years?*

c) *Which individuals and communities would have been eligible to receive payments from Stellar Sea lion Impact Payments?*

3) **What would be the effects of non-fishing related economic developments or policies on the economic impacts and benefits of commercial fishing?**

Example Studies: (The following are real and/or hypothetical studies.)

a) *How many people might be affected if fisheries resources were affected by development of the Pebble mine in the Bristol Bay Region and in which communities would those impacts fall?*

b) *If the US Minerals Management Service offshore lease sale in Bristol Bay is successful, would there be enough human resources in the local communities to fulfill the year-round employment requirements of oil and gas development companies?*

c) *How would the development of a commercial fishing harbor in Adak affect the employment situation in the community?*

6.3.3.4 The Types of Fishing Employment Data that are Needed for Research?

There are three broad types of fishing employment data or measures that are usually of greatest importance for fisheries research:

- Fisheries participation—the number of individuals participating in fishing
- Fisheries full-time-equivalent (FTE) employment—the number of years worked in fishing
- Fisheries earnings—income earned by fishermen from fishing

Depending on the research issue, different measures may be most important—or all three may be important. For example, a decline in prices may affect earnings but not affect participation or FTE employment. A decline in the TAC may not affect participation but may affect FTE employment and earnings. Crab rationalization greatly reduced crab fishing participation, due to fleet consolidation, but had a smaller effect on crab fishing FTE employment, because boats fished longer seasons.

For most fisheries research it is not sufficient to know total Alaska fisheries participation, FTE employment or earnings. To be useful, these data are usually needed by fishery, by fishermen's community of residence, or by both fishery and community of residence. The text box below shows the various levels of disaggregation of fisheries data that are often required.

Potentially Useful Levels of Disaggregation of Fisheries Employment Data

1) By Fishery
2) By Residence of Fishermen
   a) By State
   b) By Region
   c) By Community
3) By Fishery and Residence of Fishermen
   a) By Fishery and State of Residence
   b) By Fishery and Region of Residence
   c) By Fishery and Community of Residence

6.4 Options Brought to the Work Group

This section introduces the set of options that could be used to improve employment data for the commercial fish harvesting sector in Alaska. The initial list is identical to the options listed in the Work Group Primer found in Appendix B –Work Group Primer.

The goal in developing the preliminary set of options was to develop a basis for discussion. The initial set of options was developed by Northern Economics alone, solely for discussion purposes, and it should be emphasized that none of the initial options were vetted or pre-approved by any agency or stakeholder group. Finally, it should be noted that in presenting these options, Northern Economics does not imply that the options are necessarily feasible or practicable, nor should it be inferred that no other options are possible. Following the initial presentation to the work group, participants augmented the initial list with additional options and sub-options.

The set of options are divided into two general categories: 1) Options that will improve the ADF&G Commercial Crew License data, and 2) Options that will report activities of fishing crewmembers, including both ADF&G license holders and CFEC permit holders acting as crew.

6.4.1 Proposed Options to Improve ADF&G Commercial Crew License data

This section presents options to improve the ADF&G Commercial Crew License Data.

Option 1.1 Maintain the existing ADF&G Commercial Crew License System: As indicated in previous discussions, all licenses are issued annually by vendors throughout the state who complete a hand-written form with duplicates. A copy is issued to the individual as their license and the original is submitted to the state. Each license issued has is pre-printed with unique number for that particular year, and therefore each individual receives a unique license number. This system is effective in that it allows licenses to be issued instantly in nearly any community in the Alaska. However, because the data are completed by hand by many hundreds of vendors, and because information verification requirements are minimal, entering and using the data in an electronic database is problematic. This option would maintain the status quo.

Option 1.2 Change to a Renewable License System: Under this option individuals would be issued a renewable license with a unique and non-transferable license number. It is presumed that this license number would be generated by the same system that generates CFEC Permit IDs. Once a license is associated with an individual, the ID number would be permanently associated with the individual, whether the number is associated with a crewmember license or with a CFEC permit. Each license holder would be issued a semi-permanent license card, which presumably would include a magnetic data strip.

Crew licenses would be renewed in the same manner that CFEC Permits are renewed. New licenses would still be available and could be issued using the same or similar system that currently exists. New paper-copy licenses would be valid only until such time as a permanent license card could be issued. In order to encourage existing license holders to renew their licenses in a timely manner, it is anticipated that the price of new licenses (or duplicate licenses) would be considerably higher than the cost of a license renewal. Another option would be to issue multi-year licenses.

Option 1.3 Create a Computerized Real-Time License Issuance System: This option would re-vamp the current system used to issue commercial fishing licenses, and because they utilize the same issuance system, would incidentally re-vamp the system for issuing recreational fishing and hunting licenses. The new system would be similar to the licensing system used by the Oregon Department of Fish and Wildlife.

In this system, all license vendors would be issued a computer that connects electronically to the license database. When individuals request to purchase a license, they would be asked to provide if they have purchased a license in the past and to provide positive identification (e.g. a valid driver's license with photo id, a passport, etc). The information would then posted to the database, and if a match is returned to an existing entry, the purchaser would be asked to verify and update the information in the database, and the license would be renewed with the same license ID as in previous years. If no match is found, then all of the information for a new license would be collected and verified by the vendor, and entered directly into the database. In either case (new license or license renewal) the system would print the licensee's information including bar-coded or magnetic data onto a semi-permanent card, similar to those used for pre-paid calling cards.

Given the number of licenses that would be issued or renewed annually, it is likely that license fees coupled with reductions in data entry costs would likely be able pay for this type of system within a few years.

6.4.1.1 Crew Licensing Options Provided by Work group session Participants

Option 1.4 Upgrade Existing ADF&G System for Issuing Crew Licenses: This option was proposed during the work group session. The system of issuing annual licenses through vendors would be retained. However, changes would be made, potentially including but not limited to (a) improving the reliability of the data collected, and (b) collecting more or different information.

Option 1.5 Create a New "Professional Crew" License: This option was proposed during the work group session. This is, in effect, a combination of Option 1.1 and 1.2. The existing "regular crew license" system would be maintained as is—allowing individuals to quickly and easily get licenses. However, crew would have a new (and voluntary) option of obtaining a "professional crew license." This license could be applied for online or by mail or at selected other locations, analogous to the ways in which permits may currently be purchased for non-limited fisheries. Professional crew license holders would receive a permanent crew number and could renew their licenses (updating address and other personal information annually). There would need to be some incentive that would make this option attractive to most individuals who fish more than occasionally (e.g. fish in multiple fisheries or expect to fish in more than one year). This might include limitation of eligibility for potential future "crew quota shares" and/or fisheries assistance programs to professional crew license holders. The rationale for this system is that it would provide more reliable information for those crew who are most involved in and most dependent on the fisheries, including the ability to track long-term participation.

6.4.2 Proposed Options That Will Report Activities of Fishing Crewmembers

Option 2.1 Maintain the status quo: Under this option no changes would be made to enhance reporting of activities of fishing crewmembers.

Option 2.2 Require all crewmembers and permit holders to complete and submit an "Alaska Crewmember Activity Form" at the end of each fishing year: The form would ask all crewmembers and permit holders to indicate the fisheries in which they participated as crewmembers, the vessel(s) on which they participated and the number of trips they took. A hypothetical version of an "Alaska Crewmember Activity Form" is shown in Figure 4.

The Alaska Crewmember Activity Form (hereafter the form) would be available online, and it would also be mailed to each licensee and permit holder at some point late in the year. In order to ensure that the form is submitted by all licensees and permit holders, the regulations would indicate that the licensee or permit holder would be penalized for failure to complete the form in a timely and accurate manner.

Figure 4. Hypothetical Alaska Crewmember Activity Form

Alaska Crewmember Activity Form

Crewmember Information

Name:	ADF&G Crew License Number: Or CFEC Permit ID:
City, State and Zipcode:	

Activity Information

Please fill complete a row for fishery and vessel on which you fished on during the past **reporting period**. If you fished on more than on vessel in a particular fishery, complete a separate row for each vessel.

Fishery (see back)	ADF&G Vessel #	Permit Holder ID (if known)	Month	Number of Trips	Average Time at Sea

Note: The back of this form would contain a list of the Alaska fisheries for which permits are issued.

Option 2.3 Require all active permit holders to submit a completed "Alaska Crewmember Activity Form" at the end of each fishing year for each crewmember they employed during the year: This option is very similar to Option 2.2 except that permit holders would be required report the activities of all of their crewmembers. The reports would be due by January 15 of the following year. In this option crewmembers would not be required to report activities.

Option 2.4 Require all active permit holders to submit a completed Alaska Crewmember Activity Form for all crewmembers they engaged each time a landing is made: The reports could be submitted directly to the appropriate management agency by fax or email, or they could be provided to processors or tender vessels with each delivery.

Option 2.5 Require Permit holders to submit a completed Alaska Crewmember Activity Form whenever registering for a fishery or whenever undergoing a tank inspection. Registration is required in the Bristol Bay drift and set gillnet fisheries, and in several groundfish and herring fisheries, and tank inspections and/or registration is required in most crab fisheries. In this option, the Alaska Crewmember Activity Form would be completed prior to actually engaging in the fishing activity.

Option 2.6 Require observers to complete an Alaska Crewmember Activity Form regarding crewmembers on any vessel observed in the federal or state fishery observer programs: Observers are required in the federal groundfish fisheries, in the Bering Sea and Aleutian Island crab fisheries and in the scallop fishery. In the groundfish fisheries, all catcher processors and vessels greater than 125' length overall (LOA) are required to carry observers 100 percent of the time. Vessels between 60' and 125' LOA are required to have 30 percent observer coverage. Observer coverage requirements in the crab and scallop fisher are slightly different than observer requirements in the groundfish fisheries.

Option 2.7 Augment the logbook reporting requirements in all fisheries that require logbooks to include completion of an Alaska Crewmember Activity Form for each week the vessel is active: In this option, the logbook forms would be augmented with an Alaska Crewmember Activity Form. All vessel operators would be required to report the activities of harvesting crew with the same frequency that logbook data are reported.

Option 2.8 Create an electronic version of the Alaska Crewmember Activity Form that would be reported on all vessels and processors using the Interagency Electronic Reporting System: For those fisheries that utilize the IERS system, an electronic version of the Alaska Crewmember Activity Form for all crewmembers would be submitted along with each landing record/fish ticket.

Option 2.9 Change the current fish ticket form to accommodate information reported in the Alaska Crewmember Activity Form. Any processor that issues a fish ticket would be required to obtain the crewmember data from the permit holder and to report the information on the fish ticket.

6.4.2.1 Crew Activity Documentation Options Provided by Work group session Participants

This section describes options that were proposed by work group session participants during the discussions. The option descriptions, have in some cases, been enhanced for consistency by the authors of this report.

Option 2.2A Require that all crewmembers maintain a log book of activities during the year. Crewmembers would be required to list the permit holder, vessel and dates of all fishing trips in which they participated. The log book would be turned in to the state (ADF&G or ADOLWD) at the end of each fishing year. Because this option is similar to Option 2.2 listed above, it was treated as a sub-option.

Option 2.3A Require that Permit Holders maintains a log book of crewmembers that were on board for each fishing trip made under each of the permits used, along with the trip dates and the number of the vessel used. The log book would be turned in to the state (ADF&G or ADOLWD) at the end of each fishing year. Because this option is similar to Option 2.3 listed above, it was treated as a sub-option.

Option 2.10 Make crew subject to regular Unemployment Insurance reporting requirements similar to those required for wage and salary employees. Under this option permit holders would be required to complete ES-202 forms (or an equivalent) that would report crewmembers employed on a quarterly basis.

Option 2.11 Require permit holders to provide a copy of IRS 1099 forms (or an equivalent form) to state agencies for all crewmembers to whom crew payments were made.

6.5 Work Group Discussion on Options

During the second day of the work shop, the participants systematically worked through the list of proposed options discussing the pros and cons of each. In looking at the options, participants agreed

that the group would bear in mind the questions regarding crewmembers that need to be answered and the constraints faced by the management agencies in implementing new programs.

6.5.1 Discussion Guidelines

The following discussion guidelines were established. Participants agreed that the evaluation of options should be based on how well they answer the questions and deal with the constraints listed below.

1) Does the option under consideration provide information that will indicate how economically important the commercial fisheries are…
   a) by fishery?
   b) by geographic area down to the community level?
2) Does the option under consideration track individual crewmembers, which will enable reliable estimates of…
   a) number of person-months employed in each fishery?
   b) the consistency of participation by individual?
   c) the annual round of participation by individual?
   d) the income of crewmembers by fishery and month?
3) How does the option under consideration mesh with the needs of agencies to collect biological data?
4) Does the option under consideration work in both fisheries managed by ADF&G and fisheries managed by NMFS and IPHC?
5) Does the option work well for both shore-based landings and offshore fisheries?
6) Does the option maintain confidentiality protections provided to permit holders and processors and provide confidentiality protections for crewmembers?
7) How well does the option mesh with existing data systems and data sets?

6.5.2 Discussion of Pros and Cons of Options to Upgrade the Licensing System

Work group session participants discussed some the basic pros and cons of the existing license system. We list these below:

- **Pros**
  - Licenses can be obtained in nearly every community in Alaska.
  - Licenses can be issued on very short notice
  - License fees generate substantial income for the state.
- **Cons**
  - License numbers for an individual are not permanent.
  - Annual data entry costs are high, relative to applications in which the data are used.
  - Tracking licensees over time is not possible without access to highly confidential SSNs.
  - There are no means to link individual licensees to commercial fishing activities.

After reviewing the options for upgrading the licensing system, the group decided to defer discussion on Options 1.1 – 1.3. Some participants noted that doing nothing—Option 1.1 was unacceptable to most in the group—some changes clearly had to be made to the license system. However, it was also suggested that the changes proposed in Option 1.2—creating a renewable license, and Option 1.3—moving to an entirely real-time licensing system were changes that were too large in scope until it was more certain that the existing system was truly unable to provide the information necessary. Therefore, discussion focused on Options 1.4—upgrading the existing system, and Option 1.5—creating a professional crew license.

6.5.2.1 Pros and Cons of Option 1.4

Option 1.4 Upgrade Existing ADF&G System for Issuing Crew Licenses: The system of issuing annual licenses through vendors would be retained. However, changes would be made potentially including, but not limited to, (a) improving the reliability of the data collected, and (b) collecting more or different information.

The discussion built on the assertion by some participants that working with the existing license data sets was very difficult, and that it was extremely difficult and time consuming to track individual license holders over time, primarily because there were no consistent identifiers. Some participants suggested that this issue was due in part to the fact that the license information is re-entered by ADF&G every year for every license holder and that there are often subtle changes in the entries that preclude matching across year in computerized searches. Participants also pointed out that persons applying for a crew licenses are not required to provide any proof of residence or any other official ID in order to obtain the license.

During discussion of this option, some participants suggested that ADF&G could upgrade and improve collection of addresses, SSN, and other data and require that an official picture ID to be produced in order to receive a license. These types of changes would allow individual license holders to be more readily tracked over time, and would help researchers understand crew longevity, mobility, migration, etc.

Others in the group asserted that it would be very difficult to get vendors to verify identification and that it would be might not be legal to require that crewmembers provide a SSN in order to get a license. Further, some participants noted that any permit holder could also act as crew and that even if crew license information was known, it would not provide information about all of the activities crew conduct.

In the end participants agreed that ADF&G would make a concerted effort to examine the existing crewmember license database and to look for ways that the data could be cleaned and improved.

6.5.2.2 Pros and Cons of Option 1.5

Option 1.5 Create a New "Professional Crew" License: This option was proposed during the work group session and is in effect, a combination of Option 1.1 and 1.2. The existing "regular crew license" system would be maintained as is—allowing individuals to quickly and easily get licenses. However, crew would have a new (and voluntary) option of obtaining a "professional crew license." The professional license could be applied for online or by mail or at selected other locations, analogous to the ways in which permits may currently be purchased for non-limited fisheries. Professional crew license holders would receive a permanent crew number and could renew their licenses (updating address and other personal information annually).

The proponents of this option indicated that there would need to be some incentive that would make this option attractive to most individuals who fish more than occasionally (e.g. fish in multiple fisheries or expect to fish in more than one year). Incentives might include a limitation of eligibility for potential future "crew quota shares" and/or fisheries assistance programs to professional crew license holders. Other incentives might include a reduced renewal fee for professional licenses.

Proponents indicated their rationale for this system is that it would provide more reliable information for those crew that are most involved in and most dependent on the fisheries, including the ability to track long-term participation. Furthermore, license renewals with a permanent license number assigned to an individual would likely be cheaper to enter and track from a database perspective than would entirely new licenses every year. Participants also pointed out that a system with multiple classes of licenses is not entirely new. Resident and non-resident classes of licenses already exist as well as children's licenses and "dude" licenses. Therefore creating new categories of licenses might not be that big of a deal. Finally some participants suggested that if professional crewmembers were issued a semi-permanent crew card with a magnetic strip or bar-code it would facilitate integration with the eLandings system.

On the negative side, some participants noted that the professional crew license could cause discrimination against professional crewmembers by permit holders or vessel owners, if it was believed that they might at be allocated some portion of the fishery when/if they are rationalized. Furthermore, some participants suggested that adding a professional license class might push the existing license system beyond its usefulness.

6.5.3 Discussion of Pros and Cons of Options to Track Crew Activity

Before looking at specific options, to track activity of crewmembers, there was a general discussion of the pros and cons of options to track crew activity.

- **Pros**
  - Linking crewmember data to data of permit holders will enable not only estimates of activities of crew days worked, but will also enable estimates of income, even if no direct data are collected on crew shares.
- **Cons**
  - Without a reliable license database that accurately tracks individuals over time, all of the options reporting crew activity will be difficult to implement and utilize.
  - Collection of data on crewmembers will be costly to whichever agency is charged with the responsibility
  - There is no regulatory mandate to collect the information so it unclear which agency should bear the cost of collecting and maintaining the data.
  - The same lack of a regulatory mandate will make enforcement of data submission difficult.

Before beginning discussion of options to track crewmember activities, the group decided to defer discussions of Options 2.1, 2.5, 2.6, and 2.7 for the following reasons:

- Option 2.1 would do nothing so there was nothing to discuss.
- Option 2.5 would have required reporting crewmembers whenever a vessel was inspected. The group felt this option would not provide a broad enough coverage of enough of the fisheries to be meaningful.
- Option 2.6 would have required reporting of crewmembers by observers. Since only vessels greater than 60 feet fishing in the groundfish fisheries or in the rationalized crab fisheries would be affected, the group decided that this option would not cover enough of the vessels to provide meaningful information.
- Option 2.7 would augment regular log book data with crewmember logs similar to that shown in Figure 4. on page 39. Work group members felt that since log book data that are currently collected are not entered into electronic data bases, it would be unlikely that crew data on these forms would be available for analysis.

6.5.3.1 Pros and Cons of Option 2.2A

Option 2.2A Require that all crewmembers maintain a log book of activities during the year. Crewmembers would be required to list the permit holder, vessel and dates of all fishing trips in which they participated. The log book would be turned in to the state (ADF&G or ADOLWD) at the end of each fishing year.

Steve Branson and Tim Henkel, both of whom represent crewmembers, presented this option. They indicated that from their perspective crewmembers around the state are interested in being counted. During the discussion some participants suggested that data entry could be facilitated with an online data entry system that would allow crewmembers to enter their data directly into a database.

The option of using a logbook generated considerable discussion. The pros and cons listed below summarize that discussion, along with several outstanding issues.

- **Outstanding Issues**
  - Who would be required to report—all crewmembers or only "professional" crewmembers?
  - Would it be possible to require permit holders to sign forms or otherwise vouch for the accuracy of the log books?
  - Which agency would be responsible for collecting, managing and distributing the data?
- **Pros**
  - Crew logbooks could provide a lot of information without causing a reporting burden on other stakeholders such as permit holders and processors.
  - An online logbook form could reduce data entry costs for the managing agency
- **Cons**
  - Would all crewmembers be required to complete logbooks? Crew logbooks could provide a lot of information without causing a reporting burden on other stakeholder such as permit holders and processors.
  - Without a legislative mandate there would no way to require the submission of logs.
  - Verification of information would be difficult without also requiring information from permit holders.

- Without a verification process, there could be significant incentives for individual crewmembers to enhance their participation records, particularly if it is believed that participation might lead to a share of a rationalized fishery.
- Other stakeholders may oppose any information on crewmembers if it is perceived that such data could lead to an allocation to crew in a rationalization scheme.

6.5.3.2 Pros and Cons of Option 2.3 and Option 2.3A

Option 2.3: Require all active permit holders to submit a completed "Alaska Crewmember Activity Form" at the end of each fishing year for each crewmember they employed during the year.

Option 2.3A: Require that Permit Holders maintain a log book of crewmembers that were on board for each fishing trip made under each permit used, along with the trip dates and the number of the vessel used. The log book would be turned in to the state (ADF&G or ADOLWD) at the end of each fishing year. Because this option is similar to Option 2.3 listed above, it was treated as a sub-option.

Discussions on Option 2.3 quickly generated two new options that would require permit holders to report crew as employees on ES-202 forms or to submit copies or IRS 1099 forms or the equivalent in the form of settlement sheets. These two new option are discussed separately as Option 2.10 and Option 2.11

The discussion of Option 2.3 and 2.3A revealed the following pros and cons, along with several outstanding issues.

- **Outstanding Issues**
  - Would permit holders be required to keep a log book to facilitate reporting?
  - Would information report days fished by permit?
  - Would information include trip dates?
  - Would crewmembers be allowed to review records to verify accuracy of submitted information?
  - How would confidentiality issues be resolved? Would crewmembers have access to the log books in which they are reported?[24]
  - In cases of multiple permit holders on a given trip, (e.g. sablefish or halibut IFQ trips) which permit holder would be required to report, and who would be reported as crewmembers.
- **Pros**
  - Requiring submission of crew activity reports before a permit was renewed would provide significant incentives for compliance by permit holders.
  - Permit holders already keep track of this information as it is required for settlement sheets.
- **Cons**
  - The option would place a significant burden on the permit holders, while the primary beneficiary would be crewmembers.
  - Permit holders would not have significant incentives to provide complete and accurate information.
  - Verification of information would be difficult.

[24] A brief summary on the confidentiality issues related to crewmember data from the perspective of the authors of this report is provided in Appendix C– Confidentiality Issues.

- Unless complete trip information (i.e., permit holder ID and Fish ticket ID) was provided, the options would not enable estimation of crewmember income.
- Data entry could be costly.
- There would be a lack of a true enforcement mechanism without regulatory authority.

6.5.3.3 Pros and Cons of Option 2.4

Option 2.4 Require all active permit holders to submit a completed Alaska Crewmember Activity Form for all crewmembers they engaged each time a landing is made: The reports could be submitted by fax or email directly to the appropriate management agency, or they could be provided to processors or tender vessels with each delivery.

The discussion of Option 2.4 and Option 2.8 (report crew active within the IERS) were often intermixed. The goal of both options would be to create a system that would enable the reporting of crewmembers corresponding to each landing. In general, participants agreed that linking crewmember activity reports to landings would be the ideal system. However, the discussion clearly noted that developing such a system could be difficult and costly.

The following lists describe some of the pros and cons of Option 2.4. Additional pros and cons listed with option 2.8 are also likely to apply.

- **Pros**
  - Linking crewmember data to specific landings provides significantly more data than is obtainable with annual reports.
  - Estimation of crew income is possible assuming that crew share estimates are available.
- **Cons**
  - Requiring that the report come from the delivery vessels, means processors would have to report information about which they have no knowledge.
  - Verification of whether reported crewmembers are actually on board could be difficult, although it was noted that is certainly possible that both crew and permit holder would sign off on the report.
  - Reporting crewmembers with each landing could be problematic with short trips and fast-paced fisheries (such as in Bristol Bay Salmon fishery) where there is very little time to complete fish tickets.
  - Reporting crewmember on trips where multiple fish tickets are generated would be problematic. (Examples include IFQ trips where both sablefish and halibut are landed.)
  - The options would require a completely new data system.
  - The option would conceivably result in as many records as there are fish tickets, creating a significant new data management requirement with the associated costs.
  - The option does not specifically report crew incomes.
  - If crew share information was required in the report it would create significant negative incentives for accurate reporting.
  - Linking crewmembers to fish ticket creates the possibility of significant confidentiality issues.[25]

[25] A brief summary on the confidentiality issues related to crewmember data from the perspective of the authors of this report is provided in Appendix C– Confidentiality Issues.

6.5.3.4 Pros and Cons of Option 2.8

Option 2.8: Create an electronic version of the Alaska Crewmember Activity Form that would be reported on all vessels and processors using the Interagency Electronic Reporting System: For those fisheries that utilize the IERS system, an electronic version of the Alaska Crewmember Activity Form for all crewmembers would be submitted along with each landing record/fish ticket.

A significant portion of the work group discussion focused on Option 2.8 and the concept of combining a crewmember report with the eLandings system. In general, participants agreed that at least from the perspective of reporting crew activities, Option 2.8 should be regarded as the preferred system, while Option 2.4 should be regarded as an interim step.

Notwithstanding the general attractiveness of Option 2.8, participants generally agreed that the option would be expensive and difficult to implement. Furthermore, participants also pointed out that neither Option 2.8 or Option 2.4 would directly report crew shares or crew income—information that is viewed as critical to communities. Without information reporting crew incomes, several of the participants viewed the Options as inadequate.

Others pointed out that if the system provides reliable participation data by trip, then ADOLWD or other resources could focus on developing reliable estimates of average crew shares paid by fishery. Combining statistically reliable crew share information from surveys of the industry with accurate data on individual crewmember participation and gross revenue for each landing would yield reasonably accurate estimates of crew income. Furthermore, these estimates could be linked to community and could be tracked over time.

- **Pros**
  - The eLandings (IERS) system is the wave of the future; any new systems that are developed should be integrated into that system.
  - In addition, all of the pros listed for Option 2.4 also apply to Option 2.8
- **Cons**
  - The eLandings systems will only be implemented in a select few fisheries. It will be voluntary in most state-managed fisheries, and application of the system to all fisheries may be a long-term process.
  - In addition all of the cons listed for Option 2.4 also apply to Option 2.8.

6.5.3.5 The Pros and Cons of Option 2.9

Option 2.9: Change the current fish ticket form to accommodate information reported in the Alaska Crewmember Activity Form. Any processor that issues a fish ticket would be required to obtain the crewmember data from the permit holder and to report the information on the fish ticket.

Discussion within the work group with respect to this particular option was generally quite negative due largely to the fact that processors would be required to report on information (specifically the crewmembers on board the vessel) about which they have no knowledge. In addition, some participants noted that the costs of designing and distributing a new fish ticket form would be significant.

- **Cons**
  - Processors would have to report on information about which they have no knowledge. This would create a significant legal burden for processors, and would also create significant reporting and paperwork burdens.
  - A new fish ticket form would have to be designed and developed.
  - In addition, all of the cons listed for Option 2.4 also apply to Option 2.9.

6.5.3.6 The Pros and Cons of Option 2.10

Option 2.10: Make crew subject to regular Unemployment Insurance reporting requirements similar to those required for wage and salary employees. Under this option permit holders would be required to complete ES-202 forms (or an equivalent) that would report crewmembers employed on a quarterly basis.

A participant proposed Option 2.10 as an approach that would utilize the existing employment reporting system utilized by ADOLWD to report wage and salary employment and earnings.

In general, the idea intrigued the work group and many participants felt that the concept merited further investigation and thought.

There are several outstanding issues that would need to be investigated, also with some obvious pros and cons. We list these below.

- **Outstanding issues**
  - The current ES-202 form and reporting system are built around the unemployment insurance program. If fisheries were to use the reporting system, would there necessarily be a requirement for the fishing industry to be part of the unemployment insurance program?
  - Currently ES-202 reporting requirements exempt firms with fewer than 3 employees. Would this same exemption apply to fisheries, and thereby make the majority of small scale permit holders and vessel owners exempt?[26]
  - Could the ES-202 form be augmented or adapted in any way that would enable individual crewmembers to be linked to particular fisheries?
  - Fisheries are already exempt from minimum wage laws. If fisheries were to use the ES-202 system, would it also require compliance with minimum wage laws?
  - The ES-202 system was developed to report wage and salary employment. Fishing crewmembers are independent contractors. Would crewmembers necessarily have to become wage and salary employees of the permit holder or vessel owner in order to use the system?
  - Who would have the right to access the data? Would crewmembers have the right to verify that their participation was accurately characterized by the permit holder or vessel owner?

[26] At a presentation by to the Anchorage Chamber of Commerce on December 11, 2006 Neil Fried of ADOLWD indicated in response to a question from the author of this report, as to whether fishers and other independent contractors were included in his forecasts. Neil indicated that independent contractors were not required to submit ES-202 data, but that contractors (and by implication fishers) could submit ES 202 information on a voluntary basis.

- **Pros**
  - Could potentially be implemented using existing data systems.
  - Because the ES-202 reports SSNs of employees, Alaska residents could potentially be linked to communities through permanent fund application records.
  - Would not require an upgrade of the crew licensing system.
  - Would report individual crewmember earnings
- **Cons**
  - Would require state legislation and possibly federal legislation
  - Would not provide fishery-specific information, unless it is possible to add CFEC fishery code information.
  - The requirement to report employees on ES-202 forms could prove to be a disincentive for hiring additional crew.
  - The reporting burden would rest almost entirely on permit holders or vessel owners, who would not necessarily see any benefits from the program.

6.5.3.7 The Pros and Cons of Option 2.11

Option 2.11: Require permit holders to provide a copy of IRS 1099 forms (or an equivalent form) to state agencies for all crewmembers to whom crew payments were made.

Like the previous option, participants proposed Option 2.11 during the workshop; basing the option on the fact that permit holders or vessel owners already report crewmembers' participation and earnings to both the crewmember and the federal government in the form of a 1099. The option would require that a copy or a similar form also be submitted to state agencies for the purpose of estimating fishing employment and income. Participants also noted the crewmembers also receive settlement sheets from permit holders. Settlement sheets are fishery-specific, and would typically identify the permit holder and the fishing vessel, as well as the crew share percentage.

In general, participants felt that the option had some merit in theory and would answer some of the questions that needed answering. However, participants clearly stated that the option would require state legislation and possible federal legislation, and that additional information about the option would be required in order to pass judgment on the option.

There are several outstanding issues that would need to be investigated also, with some obvious pros and cons. We list these below.

- **Outstanding issues**
  - Is it possible for a state to require submission of information submitted to the IRS?
  - Would settlement sheets rather than 1099 forms be sufficient?
  - Who would have the right to access the data? Would crewmembers have the right to verify that their participation was accurately characterized by the permit holder or vessel owner?
- **Pros**
  - Access to IRS documents by other agencies may not be possible.
  - While the 1099 forms would report SSN, settlement sheets might not. If enabling legislation required reporting of SSNs, Alaska residents could potentially be linked to communities through permanent fund application records.

- Settlement sheets would be fishery specific, but 1099 forms would not contain fishery information.
- Would not require an upgrade of the crew licensing system.
- Settlement sheets would report individual crewmember earnings and possibly also crew share percentages. 1099 forms would only report earnings.

- **Cons**
  - Would require state legislation and possibly federal legislation.
  - Would require an entirely new data system for the managing agency.
  - Would not provide fishery specific information, unless it is possible to CFEC fishery code information.
  - There could be significant confidentiality issues with the option.
  - The reporting burden would rest almost entirely on permit holders or vessel owners, who would not necessarily see any benefits from the program.

7 Moving Forward

7.1 Summary

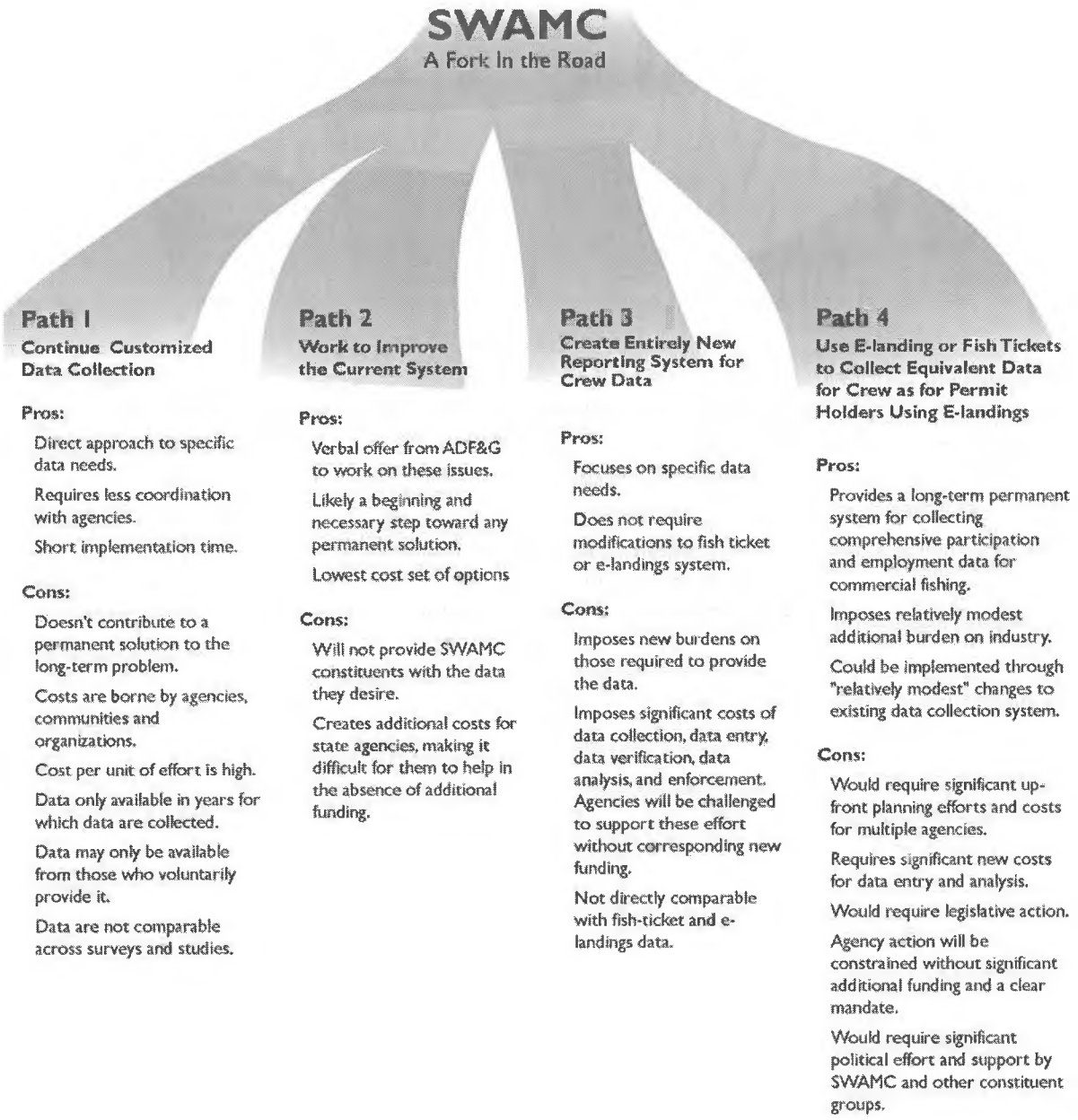
As noted in Section 6, the work group did not reach a clear decision solution to the issues discussed in this report. While work group participants generally agreed on the broad objective of "improving fisheries employment data", participants did not reach general agreement on:

- How much change is needed
- Whether the change needed means creating a new system or upgrading the current system

However, the work group session did identify several different options for improving Alaska employment data, and a variety of advantages, disadvantages, practical challenges and uncertainties associated with each of these options. In addition, the work group served to initiate discussion and consideration of these options among a variety of stakeholders, including agencies and individuals who would play a key role in implementing any new options.

Based on the work group discussion and our past experience with the process by which changes have been brought about to systems of data collection, analysis and dissemination, we see four broad "paths" which SWAMC and others might pursue to achieve the goal of improved fisheries employment data. We discuss these paths below. Each of these four paths comes progressively closer to meeting SWAMC's needs and objectives, but also would require progressively greater commitment, coordination, and effort by SWAMC and other organizations. In moving forward, SWAMC needs to decide which of these paths will best serve its short and long-term needs. Figure 5 summarizes these path while Section 7.2 discusses them in more detail.

Figure 5. Four Paths to the Goal of Improved Fisheries Employment Data



7.2 Selecting a Direction

7.2.1 Path One: Continue Customized Data Collection Efforts (Status Quo)

The first path is essentially the status quo path. Under this path, there would be no changes to the current system with regard to regular fisheries-related data collection, analysis and dissemination. Rather, agencies, communities and organizations desiring more employment than the system currently provides would collect that information through ad hoc studies and surveys—as is currently done.

There are some advantages to this approach in that it does not require any broad-based long-term planning or development of consensus among different agencies. Studies can be implemented within a relatively short period of time and tailored to collect the specific data needed.

The essential drawback to this approach is that it doesn't solve the long-term problem that SWAMC has identified and for which this study as investigated solutions. Under this approach, there would continue to be significant gaps in fisheries employment data. The costs of data collection would continue to be borne by individual agencies, communities and organizations, with high cost per unit of effort. Data would continue to be available only from people who chose to voluntarily provide it, and would not be comparable across surveys and studies.

7.2.2 Path Two: Work to Improve the Current System

Keeping but improving the current system based on crew licenses is the easiest path to getting better employment data. Specific potential improvements include collecting more information with crew licenses, improving the completeness and accuracy of data, and expanding analysis of crew license data. As discussed in Section 6, the work group identified key questions related to the completeness and accuracy of the data presently obtained from crew licenses, as well as what might be involved in addressing these issues. Answering these questions is critical to establishing the extent of how much employment data could be improved by changes to the existing crew license system.

The discussion also revealed that more fundamental changes to the employment system (Path 4) would require addressing these issues as well as understanding that this path creates additional costs for state agencies. Work group participants from state agencies indicated that any substantial new efforts which would require more personnel or materials would require some new level of funding or the scaling back of other agency efforts. While agencies acknowledge the need for change, they also recognize that legal, policy, and budgetary frameworks constrain their ability to respond.

Path Two is unlikely to meet the needs of SWAMC, other constituent groups, or management agencies themselves for comprehensive information on seafood harvesting employment by fishery and community. Note also that even relatively small changes would impose costs on the agencies which administer this system and would require investment of political effort on the part of supporting stakeholder groups.

7.2.3 Path Three: New Reporting System for Crew Data

A third path involves the creation of a new reporting system with the specific purpose of developing crew employment data. Examples of potential approaches include (but are by no means limited to) periodic fisheries employment surveys, an annual permit holder report, or an annual crewmember report. Regional solutions are also possible, such as the idea of requiring Bristol Bay permit holders to list crew numbers on fishing district registration cards in the Bristol Bay salmon fishery—which would provide information on employment and participation but only for this specific fishery.

The advantages of developing new reporting systems, either statewide or regional, is that they can focus on specific data needs, and that they do not require changes to existing, complex systems such as the crew licensing system, the fish ticket system, or the e-landing system.

However, there are numerous disadvantages to this path. Any new reporting system would impose new burdens on those required to provide the data, and would impose significant costs of data collection, data entry, data verification, data analysis, and enforcement. Agencies are unlikely to support new data collection systems without corresponding new funding. Surveys are expensive,

difficult to conduct correctly, and collect limited information. Data from new systems or surveys will not be directly comparable with fish ticket and eLandings data.

7.2.4 Path Four: Create a System Collecting Equivalent Data for Crew as for Permit Holders

This path would provide a system for collecting essentially the same information for crew as is presently collected for permit holders in Alaska fisheries—thus providing a way to collect comprehensive information about participation and employment information for all persons participating in Alaska fisheries—not just permit holders, but crew as well. This effort could be done by providing for recording of crew identifiers—permanent crew license numbers—on eLandings records and/or fish tickets. In effect, the collection of crew employment information would be built into the system at its most level.

This path would impose a relatively modest burden on fishery participants. However, implementing such a change would require very significant up-front planning efforts for multiple federal and state agencies, and would require significant new costs for data entry and analysis. It would require legislative action to implement, and agencies would be unlikely to support it without significant additional funding and a clear mandate. As previously noted, these agencies acknowledge the need for change they also recognize the legal, policy, and budgetary frameworks which constrain their abilities to respond. SWAMC and other stakeholders interested in change must also recognize these frameworks and establish goals which enable state and federal agencies to address these issues. This path would likely require significant political effort and support by SWAMC and other constituent groups to bring about these significant changes.

7.3 Addressing Key Questions and Issues

The study group believes that SWAMC has been interested throughout the project in either Path 3 or Path 4 which would lead to the development of a permanent solution that accurately and consistently provides desired data on seafood harvesting labor on an annual basis. While the long-term desire to solve these issues has not changed, the study identified key questions and issues that must be addressed before the long-term solution envisioned in path four is possible. The most important of these questions and issues are discussed briefly below. Note that many of these paths are also present within paths two and three, and that paths two and four could be pursued concurrently.

There are differences in perceptions about what the current system is capable of accomplishing

There was disagreement among work group session participants about what the current crew labor system is capable of accomplishing. Some participants who had worked with the data in the past indicated that they believed they firmly understood the limitations of the current system, and that it was not possible to achieve the kind of employment data that are needed solely by improving the current system (Path 2). Others said that they felt the capabilities and limitations of the current system are not completely understood, and that changes to the system might address many of the perceived data gaps. Clearly, key stakeholders must agree about the limitations of the current system and the need for an improved system if efforts to enact an improved system will be successful.

Thus, a key effort to removing this issue is finding a mechanism that generates that consensus about the need for significant change. The work group session was a first step in building that mechanism. It was clear by the end of the work group session that many parties had moved toward recognition of the current system's limitations. That said, unofficial acknowledgement in a small work group is not

the same as official and public recognition. The latter will be needed to move any substantial effort for more extensive change (paths three or four) forward.

We need to clarify implications of confidentiality laws and inclusion of crew information on fish tickets

Several of the long-term options discussed during the work group session included the idea of including crew identifiers on fish tickets or eLandings records as a way of recording crew participation in fisheries. This change would be at the heart of most approaches to Path 4.

While there was broad support in the work group session for this concept, several participants raised concerns about confidentiality issues. The key question is whether including crew identifiers and other information on fish tickets and/or eLandings information would necessarily give crew legal access to information on the fish tickets and, if so, to what information. This question would have to be answered by legal counsel and potentially settled by the courts in the long-run. If crewmember data are treated in the same manner as vessel owner data, then crewmembers will not automatically have access to harvest and price information included on fish tickets. However, if crewmembers are treated like permit holders, then they would have access to harvest and value data that they are not currently able to access. Thus, there are several important, unanswered questions regarding the use of fish tickets to record crew data:

- Will crew be able to access fish ticket data beyond their own participation?
- What is the functional effect of allowing access to more than just participation data?
- Is potential access by crewmembers to more than participation data a political obstacle that would stop forward progress in developing any new system?

Path 4 approaches involving collecting crew identifiers with fish ticket and/or eLandings raise a variety of practical issues relating to how difficult this change would be. Examples of these issues include (but are not limited to):

- Can fish tickets physically hold more information? Some participants indicated that the fish ticket has reached its functional limit in the amount of information it can collect.
- How much time and effort would be required of permit holders and/or crew to include this information?
- What additional burden would be placed on processors who at present bear responsibility for the accuracy of the information on fish tickets?

These issues were raised at the work group, and were cited as potential arguments against this approach. Without more information, the extent to which they are valid or significant concerns is unclear.

We need to ensure accuracy and completeness of current data first

The work group revealed varying levels of faith in the accuracy and completeness of data currently collected from crewmembers. However, there was consensus within the work group that a logical and prudent first step in any process to improve crew data collection would be to ensure that the current system collects accurate and complete data. One discovery of the work group process was that license holders are not required to show photo identification when purchasing a license. While checking an

individual's license would seem to be a logical step in ensuring the accuracy of collected data, there was some concern from ADF&G that vendors would be unwilling to check identifications.[27]

The work group discussed several steps to ensuring the accuracy and completeness of current data:

- Checking the photo identification of crew license applicants to ensure that data recorded on licenses are accurate
- Automating the current license application system to include better online options and encourage more online participation
- Creating a professional crew license containing a barcode which could be used to record participation in fisheries

Understand how the Current Vendor System is Important to Stakeholders

The work group repeatedly heard concerns about continuing the current vendor system and ensuring its health. The current vendor system is composed of small and large retail vendors who sell recreational fishing and hunting and commercial crew licenses. These licenses are recorded on paper with copies of the licenses sent back to ADF&G for data processing. The license sales can represent an additional source of revenue and the low tech approach makes licenses easy to acquire and replace even in the most remote locations. The system is very simple, but requires extensive labor both for the vendor and ADF&G. Any project moving forward is going to have to deal with this functional, but technologically simple system. Key questions that need to be answered include:

- Is the state willing to allow the vendor system to change? Does the system serve the licensing program or does the licensing program serve the vendor system?
- How expensive would it be to replace or modify the vendor system with a system that would issue more durable licenses that can interact with modern technology?
- Would there be long-term cost savings by replacing paper licenses that need hand data entry with an all electronic system?

In recent years, licenses have also been available on the internet. We note that if an applicant purchased a license in previous years then this system automatically completes the applicant's address during the application process if the applicant enters the exact name and birth date they used in the prior year. Thus, ADF&G is already using an option which could affect the current vendor system. The authors note that if the system is capable of retaining an individual's address from year to year than it also might be capable of retaining a permanent identification number from year to year.

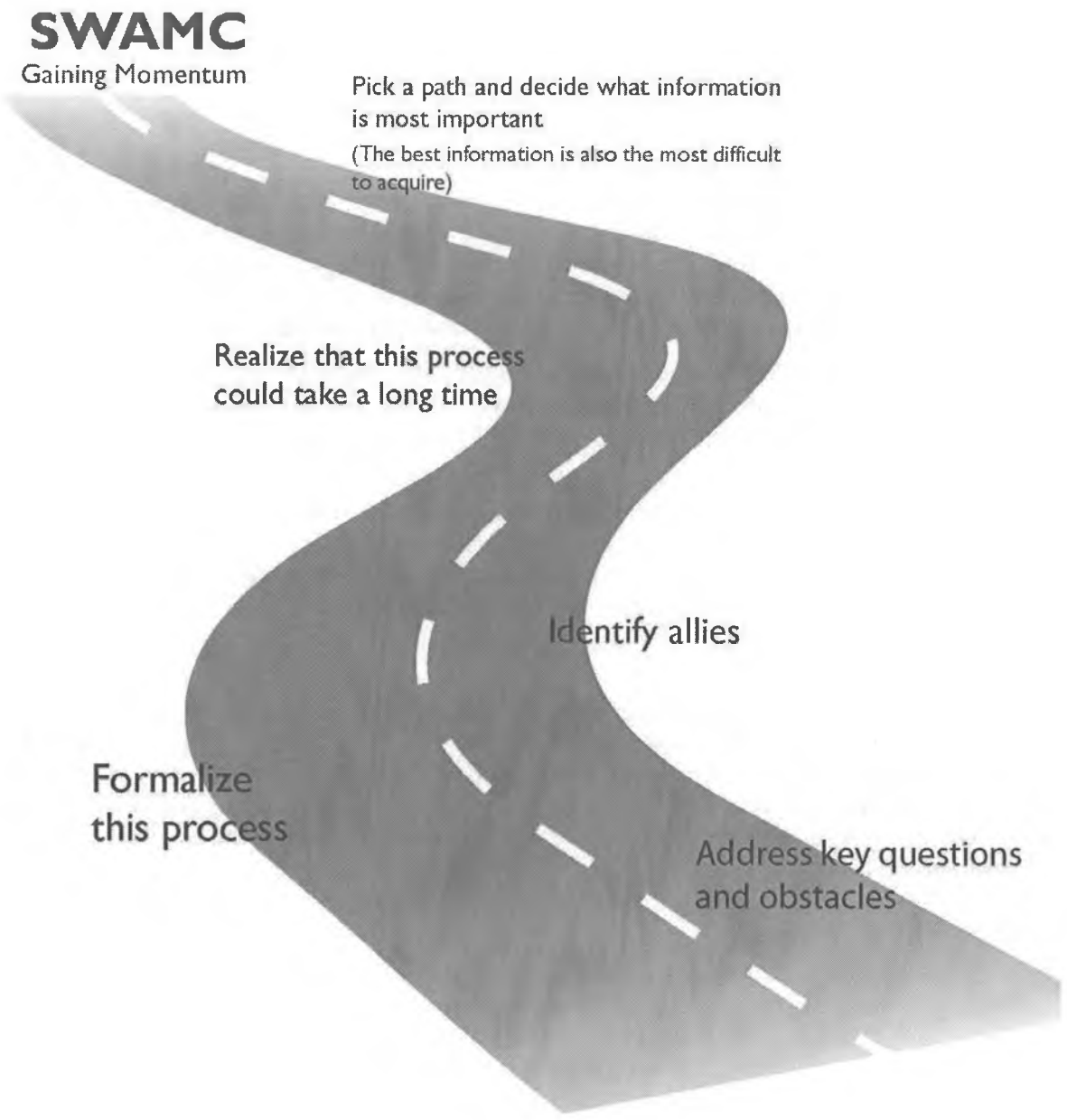
Clearly the current vendor system is important to stakeholders and the Work Group Session was not large enough to fully flesh out the magnitude and breadth of the issues associated with the vendor system.

[27] The authors note that the same vendors also sell recreational fishing licenses and photo identification is required to purchase these licenses.

7.4 Maintaining and Building Momentum

In whatever direction SWAMC chooses to move, it is clear that a key component of success will be maintaining and building momentum.

Figure 6. Steps to Building Momentum



Pick a path and decide what information is most important—the best information is also the most difficult to acquire

SWAMC may have already completed this first step through this project. This project affirmed that SWAMC and SWAMC constituents need reliable annual data on seafood harvesting labor on a fishery and community level. The project also affirmed that the best information will be the most difficult to

acquire because it requires the greatest effort. It is now in SWAMC's hands to decide whether the pursuit of a long-term solution that meets constituent needs is worth the time, money, and effort it will take to change the current system.

Realize that this process could take a long time

SWAMC will need to realize that the path toward an acceptable permanent solution could take a long time. Work group discussions clearly showed that the session itself was simply the first step in this process. Changing this system will require long-term coordinated efforts that start by convincing key stakeholders that the system needs to be changed.

Identify allies

SWAMC and SWAMC constituents need to identify allies in this process. One benefit of the work group session is that faces and names came together. Additionally, the session clarified stakeholders' needs. SWAMC now needs to work on identifying stakeholders that would make good partners in this process and build bridges to those stakeholders. Again, the work group session was a positive start along this road; however, SWAMC must also work toward recruiting from outside the work group. Work group size limits and weather prevented the involvement of potential allies.

We also suggest reaching out to potential allies in other areas. Jon Isaacs, the work group moderator, found that the Pacific Region NOAA Fisheries staff was facing many of the same issues with crew data in their region. Identifying allies on a national level could help force change through the federal system.

SWAMC legislators and other legislators interested in this issue will be key allies for this project. Participants in the work group session repeatedly indicated that state and federal agencies do not have a legislative mandate (or funding from the legislature) to address these issues. We believe that a legislative mandate will be a key component in a permanent solution.

Formalize this process

Once allies have been identified and recruited, the next step may be to formalize this process through a continuing working group. The more that this group can include commitments of staff and staff time from state and federal agencies, the higher the likelihood of long-term change. The authors believe that formalizing the process is the best way to ensure that this issue keeps moving forward. Without formal commitments and regular meetings, the process is likely to stall and the benefits of this project will likely waste away.

Begin Eliminating Obstacles

A key step toward maintaining momentum is to begin addressing the key questions and issues outlined in Section 7.3. These questions will delay progress toward a permanent solution until they are addressed. ADF&G representatives at the work group session made verbal commitments to explore these issues. However, these efforts will be more successful if they receive support from a formalized working group and the legislative branch.

That said, it has been clear throughout the project that the specific information desired by SWAMC will only be provided by a clear, long-term solution that moves the collection of accurate crew data to the same level of effort that government currently places on permit-holder data.

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Appendix A –Sources of Seafood Harvesting Labor Data

Kruse (1988) notes that for the commercial fishing industry, three statistics on employment are often presented: annual average employment, peak monthly employment and number of employees or participants. Employment is the number of filled positions at a particular time. Peak monthly employment is the greatest number of filled positions in any one month of the year. Annual average employment is calculated as the sum of the estimated monthly employment for the year, divided by twelve. Annual average employment is a useful statistic for many sectors of the economy, but for the fishing industry (particularly fish harvesting) it is not clear that it is the most appropriate employment statistic, because it ignores the fact that it may not require twelve months of fishing for each fisherman to earn a respectable annual salary. Finally, the number of employees or participants is the number of individuals (unduplicated count) employed during a particular time period. This number is useful in determining the total number of people employed, as well as movement of those individuals as they change jobs.

Estimates of these three types of employment statistics are based on either primary or secondary data. Primary data, also known as original data, are collected and maintained to satisfy the needs of the agency funding the collection or their constituents. That agency is known as the primary user. Primary data have not been manipulated, compiled or aggregated. Secondary data are defined as data that have been in some way manipulated, aggregated and/or compiled from their original form. Users of this category of data are known as secondary users.

Primary data on employment in Alaska's commercial fishing industry are limited. As noted in the introduction, neither the ADOLWD nor the U.S. Bureau of Labor Statistics, the two primary sources of employment data for Alaska, collect information on self-employed persons.[28] The majority of fishermen in Alaska are self-employed workers who are paid a percentage of vessel gross earnings adjusted by certain expenses. However, other federal and state agencies collect data that can be used to estimate fishing employment directly or can be used by secondary users to estimate employment. Primary data are obtained from on-going mandatory reporting and licensing programs and from one-time or periodic surveys that may be voluntary or compulsory. Most of the primary data collected are publicly accessible.

Secondary users include various government agencies and other entities, such as private consulting firms, that have developed algorithms for generating estimates of seafood harvesting labor based on available primary data. The methods of manipulating primary data have evolved over the years as secondary users attempt to refine employment estimates.

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[28] Only those seafood harvesting operations hiring more than 10 people and paying wages are covered by unemployment insurance (Thomas, 1987). Of total covered employment, covered fishing employment is a very small part. Most covered commercial fishing is non-disclosable under state law. That means that three or fewer firms are in the industry or that one firm supplies 80% or more of the employment. As a percentage of seafood harvesting employment, covered seafood harvesting employment is a very small amount.

The ADOLWD and BLS employment data series include the industry category "agriculture, forestry, fishing & hunting," but the "fishing"-related employment in this category consists of wage and salary jobs such as those at fish hatcheries. Misreporting in some years can result in inaccurate employment numbers in this category. In 1997, for example, jobs at a large fish-processing firm were mistakenly included in this category in ADOLWD wage and salary employment estimates (Northern Economics, Inc., 2000).

Primary Seafood Harvesting Labor Data

Federal Government

Bureau of Economic Analysis

The Bureau of Economic Analysis in the Department of Commerce is a source of employment and income information. The BEA estimates annual averages of state and local (e.g., borough/census area/division) employment consisting of number of wage and salary jobs, sole proprietorships and general partners. Estimates of the number of proprietors are solely based on information from the Internal Revenue Service, mainly from Form 1065 for partnerships and Schedule C of Form 1040 for sole proprietorships. Fishermen who are self-employed are required by tax regulations to submit a Schedule C each year they work. The BEA adjusts its estimates of the number of sole proprietorships to account for the people who do not file the form as required (Zavrel, 2006). However, self-employed fishermen included in BEA's employment estimates are grouped with other proprietors in the category "Nonfarm proprietors employment." Many, if not most, of the individuals in this category who reside in areas economically dependent on fisheries, such as the Aleutians East Borough, are fishermen, but it is not possible to determine the exact proportion because of the aggregation of data.

Census Bureau

Nationwide census data, which are gathered every ten years by the U.S. Census Bureau through in-person and telephone interviews with household members, provide information on both wage-and-salary employment and self-employed persons. Response to a census survey is required by law. Census 2000 examined occupations of the employed civilian population 16 years old and older. Two questions on occupation were asked of everyone 15 or older (with responses tabulated for those 16 and older). The first question focused on the kind of work done, while the second asked about the duties of the job. The descriptions provided in these two questions, along with the answers to the questions on type of industry and whether an occupation was with the government, a private for-profit organization, a nonprofit organization, or a family business enabled the Census Bureau to classify the responses into one of 509 occupation categories. Occupation classifications were based on the 2000 Standard Occupation Classification system.

Several factors limit the reliability and usefulness of census employment data. First, the most recent census was conducted in 2000, and the employment information may be outdated. Second, there is a lack of separation between fishery and forestry and mining employment data. Third, the census asks for current employment as of April 15 on the year of the census. Since most salmon fisheries run from June through September, many people and households that depend on salmon fishing are not counted as currently employed as fishers in the census summary data. A fourth limitation is that many fishing community members fish part time, or hold other jobs while they fish. The census data does not allow analysis for this kind of situation. A fifth limitation is that the occupational data are based on the sample of households who reported to the Census 2000 long form. Nationally, approximately 1 out of every six housing units was included in this sample. As a result, the estimates are subject to sampling error.

National Marine Fisheries Service

Bering Sea and Aleutian Islands and Gulf of Alaska Groundfish Catch Accounting System

NMFS recordkeeping and reporting requirements require reports from vessels participating in groundfish fisheries in the U.S. Exclusive Economic Zone (EEZ) off Alaska (50 C.F.R. 679.5). Catcher vessels with a length overall of greater than 60 feet must complete a Groundfish Daily Fishing Logbook (DFL), while catcher/processors and motherships receiving groundfish must complete a Daily Cumulative Production Logbook (DCPL). Data required to be reported by vessel owners or operators include the number of crew, excluding certified observer(s), on the last day of the weekly reporting period in a mothership or catcher/processor DCPL; and in the DFL on the last day of a trip for a catcher vessel.

NMFS currently operates an electronic reporting (ER) system for collection of logbook information from the groundfish fisheries (NMFS Alaska Regional Office, 2006b). The ER system allows catcher/processors and motherships to submit logbook data via e-mail or direct from a modem from their computer on board.[29] The benefits of the ER system include improved data quality, automated processing of data, improved process for correcting or updating information, and more timely data available to fishery managers. The ER system is gradually being replaced by the Interagency Electronic Reporting System described below. The switch between data reporting systems will become mandatory sometime in 2007 (Ackley, 2006).

Interagency Electronic Reporting System

Recently, an electronic data reporting system, called the Interagency Electronic Reporting System or eLandings, was developed through a collaborative effort by NMFS, ADF&G and the International Pacific Halibut Commission (IPHC), with funding from the Pacific States Marine Fisheries Commission (NMFS Alaska Regional Office, 2006c; State of Alaska, 2006). The goal of the joint effort is to develop a single, Internet-based reporting system for Alaska fisheries. The eLandings system is designed to eliminate reporting duplication and increase efficiency for harvesters, processors and fishery managers. To use the system a computer and printer and an Internet connection with e-mail are required. In addition, users must request authorization and reserve a particular UserID and password. The system allows users to submit their landing report data to all mandated agencies through a series of eLandings Web pages.

The eLandings system was first used in 2005 in the Aleutian Island's Western and Eastern golden king crab fisheries. Currently, eLandings is used to report landings and/or production data for the IFQ/CDQ crab and Community of Adak golden king crab, halibut and sablefish IFQ and state-wide groundfish fisheries. In the future, the system will be expanded to include landings and production data reports for shellfish, salmon, herring and other Alaska fisheries.

Data reported in the eLandings reporting process include ADF&G fish ticket record information,[30] IFQ fisher/processor quota harvest and processor production information. In addition, reported data

[29] The ER system consists of two principal components (NMFS Alaska Regional Office, 2006b). The ER Client software is used by personnel on a vessel to enter data and transmit data to NMFS. The ER Host software runs at the NMFS Alaska Regional Office in Juneau. The ER Host system receives and logs transmitted files, validates the data, loads the data into an Oracle database, and sends a return receipt report to the vessel or processing plant informing them of the status of their submission.

[30] ADF&G fish tickets are filled out by the processor for each vessel that delivers fish to that processor. Data reported on the fish ticket include ADF&G vessel number, CFEC commercial fishing permit information, date fishing began, date landed, gear type, ADF&G statistical area where fish were harvested, landed weight (in pounds) and condition of the catch by species, weight (in pounds) of discards at sea and at the dock, number

include the number of crew and observers on-board the vessel. The crew number includes ADF&G or CFEC licensed crew only, not processing crew on catcher/processors.

All data reported through eLandings are received into a large data collection repository, and from there it is distributed to management agencies like NMFS and ADF&G.

Bering Sea and Aleutian Islands Crab Fisheries Economic Data Report

NMFS requires an annual Economic Data Report (EDR) from any owner or leaseholder of a vessel that harvested or processed crab in Bering Sea and Aleutian Islands (BSAI) crab fisheries managed under the IFQ/IPQ program (50 C.F.R. 680). The purpose of the data collection program is to collect the employment, cost and sales data necessary to adequately examine how vessel and processing plants are affected by the BSAI crab rationalization program.

Labor information for catcher vessels and catcher/processors is collected for each BSAI crab fishery in which a vessel participated. The following information is recorded for crew who harvest crab and whose pay is based primarily on their harvesting work: 1) the number of crew aboard the vessel (excluding captain) who provided crab harvesting labor; 2) the total payment made to crew (excluding the captain) for their crab harvesting labor (the amount actually paid to crew in their settlement, not their earnings before crew-related expenses, such as fuel, bait, or food and provisions, were deducted. Any payments to crew for their IFQ are excluded); and 3) the total payment made to the captain for his services. The total payment to the crew and captain is the amount actually paid, not the earnings before shared expenses (such as fuel, bait, or food and provisions) were deducted. Any payments to the captain or crew for their IFQ are excluded.

The following information is recorded for crew who process crab and whose pay is based primarily on their processing work: 1) except salaried employees, the total number of processing employees whose pay was determined primarily by their crab processing activities. Crew listed in the harvesting labor information are excluded; 2) the average number of employees engaged in crab processing on the days that you processed crab. This number may exceed the number of employees with pay determined by processing work if some of the harvesting crew assisted in the processing operations: and 3) except salaried employees, the total payment made to crab processing employees. This is the amount actually paid to crew, not their earnings before crew-related expenses (such as food and provisions) were taken out. Number of employees and salaries for foremen, managers and other employees:

The report records labor expenses that were deducted (shared expenses taken off the top of gross revenues), directly charged (charged to an individual after the crew share is calculated), not charged to crew, or not applicable when calculating the crew payments in BSAI crab fisheries. The report also records what percentage of the net share (total revenues minus the expenses) was paid to the boat, crew and captain for each crab fishery. If processing workers were paid on a share system, the report records what percentage of the net share was applied to processing workers based on product value or net share. The number of vessel employees paid a set wage and the total payment for wages and salaries is recorded separately.

In addition, the report records the ADF&G commercial fishing crewmember license number or CFEC commercial fishing permit number for each vessel employee participating in any or all BSAI crab fisheries and lists the employee's location (city/state) of residence. For employees without

and type of prohibited species discarded at sea, price paid/received per pound for the recorded weight, and monetary amount paid/received.

A fish ticket is considered a legal document and requires the signature of the vessel captain or operator and the buyer.

crewmember licenses or fishing permits, the report records the location (city/state/country) of residence and the number of employees that are from each residential location.

All data are collected and held by the Pacific States Marine Fisheries Commission (PSMFC). PSMFC abides by all statutory and regulatory data confidentiality requirements, and only releases the data to NMFS, North Pacific Fishery Management Council staff and any other authorized users in a "blind" format. Specifically, all identifiers associated with data submitters are eliminated and replaced with fictitious vessel and processor identifiers for purposes of analyses.

Participation in the data collection program is mandatory for all participants in the BSAI crab fisheries. Should participants fail to submit the EDR, NMFS is authorized to withhold issuance or transfer of IPQ or IFQ.

Commercial Fisheries Employment Survey

In 2003, NMFS developed the Commercial Fisheries Employment Survey, which is designed to collect employment data for use in descriptive analyses of the economic significance of the commercial harvest sector (Office of Management and Budget, 2003). The voluntary mail survey was initially fielded in spring 2004 and ran through the summer of that year (Curtis, 2006). Due to a low response rate NMFS opted to conduct a phone survey to detect potential non-response bias (i.e., bias introduced because those who responded were systematically different from those who did not). The phone survey also had the effect of bumping up the response rate significantly (the final overall response rate was 50%).

The survey sampled from the entire population of U.S. commercial fishing vessels (with the exception of Puerto Rico and the U.S. Virgin Islands). The potential respondent universe was any commercial fishing vessel that (1) holds a federal or state permit or license; and (2) participated in fishing activity in either state or federal waters in 2003. Based on information from U.S. Coast Guard files and federal permit files, it is estimated that there are at least 20,000 federally-permitted fishing vessels, and possibly as many as 25,000-30,000 state fishing vessels. According to the Office of Management and Budget (2003), approximately 20% (or 10,000) of the federal and state vessels were expected to be sampled nationwide. Sampling strategy was a stratified random sample, with strata potentially including gear type, fishery, and geographic location.

The mail-out questionnaire was presented in tabular format, and asked each vessel owner or captain to report, for the calendar year 2003, the average number of crew taken on a trip and the number of days fished in each 2-month period in each fishery. This will allow for the estimation of: the total number of crewmembers employed (annually and by month) in all U.S. commercial fisheries; the total number of crewmembers employed by fishery (annually and by month); and the total number of days of employment by fishery and across all fisheries. Depending on the other information available regarding each vessel, it should also be possible to provide estimates of full- and part-time employment by state or by vessel characteristics such as gear type. The results of the survey are still being analyzed (Curtis, 2006).

One of the major limitations of the survey is that it will only provide a one-year snapshot of the employment situation in U.S. commercial fisheries. Repeated surveys would allow one to examine evolving trends in commercial fishing employment, but high costs may preclude the frequent administration of surveys (the proposed budget for the contract to conduct the survey in FY04 was $175,000).

Another limitation with the NMFS survey and other voluntary surveys is alluded to above—the potential for a high level of non-response. According to Curtis (2006), NMFS is currently reviewing the accuracy of the survey results given the early non-response problem. The potential magnitude of this

problem is clearly illustrated in a recent study conducted by Herrmann et al. (2004) to build a regional economic model for the Alaska snow crab (*Chinoecetes opilio*) industry. In a mail-out survey administered by the researchers, harvesters in the snow crab fishery were asked a series of questions regarding fishing operations, including the number of crewmembers typically onboard their vessels during a snow crab season of "normal" duration as occurred in 1999 and during shorter seasons. The primary residence (i.e., where they spend most of their time when not fishing) of crewmembers was also requested, since the interest of the researchers was in where labor compensation is actually spent rather than where it is earned.

However, Herrmann et al. state that the outcome of the snow crab industry data collection effort was very disappointing despite substantial resource commitments to data acquisition attempts and apparent enthusiasm from industry representatives for the project. According to the researchers, the voluntary approach of data disclosure utterly failed for the most part. While harvesters expressed interest in the project, requests for survey participation came at a bad time, coinciding with the crab rationalization discussions to which industry participants had to devote their full attention. Several harvesters indicated that they would not participate in a study funded by the State of Alaska because they were concerned that the state would use the results against them in the North Pacific Fishery Management Council crab rationalization debates. In the end, only a handful of Kodiak-based vessel owners obliged with the much hoped for data (which while sparse in overall terms, was sufficient to develop a modeling approach for the harvesting sector, subject to numerous caveats).

While it is likely that the low response rate was primarily due to survey timing and the reluctance of harvesters to disclose expenditure data viewed as highly proprietary rather than due to questions regarding crew size, this research demonstrates one of the potential drawbacks of relying on voluntary data collection to estimate fishing employment. Hartman (2002) also experienced a low (30 percent) response rate in a mail-out survey designed to estimate employment and income in the harvesting sector of the Southeast Alaska seafood industry. The survey instrument was sent to commercial fishermen who made landings in the Southeast Alaska commercial fisheries in 1994.

Regional Economic Data Collection Program for Southwest Alaska

NMFS is proposing to undertake a survey effort in the spring of 2007 to collect data required for a regional economic analysis associated with Southwest Alaska fisheries (71 FR 53668, September 12, 2006). The one-time mail-out survey will request data on employment and labor income from 2,200 vessel owners whose boats delivered fish to Southwest Alaska processors.

NMFS has hired contractors at the University of Alaska Fairbanks to conduct the data collection project (NMFS Alaska Regional Office, 2006d). Since the contractors are concerned about the low response rate of a voluntary survey, they will use an approach slightly different from those used by previous data collection studies. First, for gathering information on employment and earnings, they will rely on the survey of vessel owners. Second, for gathering information on costs of intermediate inputs used on harvesting vessels, they will survey the suppliers of the inputs rather than the vessels owners. This approach will allow the number of questions on the voluntary survey to be minimized, which will help to increase the response rate.

The contractors developed and revised a draft vessel survey and its cover letter with assistance from NMFS economists, identifying the types of employment and income questions to be asked. The contractors then met with a focus group of fishermen to gauge the reactions of the fishermen to the questions on the survey form and obtain their comments.

A draft survey provided by Seung (2006) requests information for 2005 on the following: on average, the number of crew and skipper jobs (positions) the boat had while fishing, or having maintenance or repairs performed upon it; the total number of crewmembers, skippers and owners serving as skippers employed by the boat while fishing for each of six listed species or species groups; the number of crewmembers and skippers employed who were Southwest residents and the number of owners that served as skippers who were Southwest residents while fishing for each of six listed species or species groups; the number of days the vessel's crew was paid crew liability insurance while fishing for each of six listed species or species groups; and the payment made to crew and skippers while fishing for each of six listed species or species groups.

The agency expects to conduct a similar data collection project for the Gulf Coast and Southeast regions of Alaska when the Southwest region project is completed.

Alaska State Government

Department of Fish and Game

Commercial Fishing Crewmember License

State commercial fishing regulations require any person engaged in commercial fishing to hold an annually-issued CFEC commercial fishing permit (limited entry or interim-use permit) or ADF&G commercial fishing crewmember license. According to state regulations, the term "commercial fisherman" means an individual who fishes commercially for, takes or attempts to take fish, shellfish or other fishery resources of the state by any means, and includes every individual aboard a boat operated for fishing purposes who participates directly or indirectly in the taking of these raw fishery products, whether participation is on shares or as an employee or otherwise. Crewmembers who do not directly or indirectly participate in the taking, such as vessel cooks and engineers, are included in the definition. In addition, the definition includes the crews of tenders or other floating craft used in transporting fish to land and offshore processors. However, the definition does not apply to anyone aboard a licensed vessel as a visitor or guest who does not directly or indirectly participate in the taking. Processing workers aboard catcher/processors are also excluded in the definition. As of July 1, 2005, Alaska residents and nonresidents are eligible to purchase a short-term commercial fishing crewmember license for $30, allowing them to serve up to seven days as a crewmember on a commercial fishing vessel or at set-net sites.[31] The short-term license helps commercial fishermen by giving them an opportunity to charge tourists to come work on a commercial fishing boat and "see the Alaska fishing industry up close and hands-on." In addition, the license helps fishermen who need temporary, short-term help by allowing relatives, visitors to Alaska, or friends to assist on a short-term basis in a more affordable way.

The application for the ADF&G commercial fishing crewmember license requires information on the applicant's physical location of residence (city/state/zip code) and their residency status (Alaska resident/nonresident and U.S. citizen/alien). In addition, since 1997, applicants have been required to provide a Social Security Number. This number can be used as a unique identifier to track an individual's license purchases. In addition, SSN data from ADF&G commercial fishing crewmember

[31] For a regular commercial fishing crewmember license, Alaska residents pay $60 and non-residents pay $175. For a child crewmember license (10 or less years old), Alaska residents pay $5 and non-residents pay $125.

licenses (and CFEC commercial fishing permits) can be used to verify Alaska residency by cross-matching the data with records from the Permanent Fund Dividend Program.

A person who engages in commercial fishing without holding a CFEC commercial fishing permit or ADF&G commercial fishing crewmember license (or employs unlicensed crew) is guilty of a misdemeanor and is punishable upon conviction by a fine of not more than $15,000 or by imprisonment for not more than one year, or by both. In addition, a conviction may result in the suspension of a person's commercial fishing privileges and licenses for a period of not more than three years.[32]

The ADF&G commercial fishing crewmember license file is the single direct source of crew employment data (Fina, 2006). However, the data simply quantify the number of people who purchased a license and therefore are eligible to work in the fisheries as crewmembers in a given year; it is not possible to determine whether a license holder actually participated in any fishery. Nor does the data reveal how long actual participants worked (Patton and Robinson, 2006). For example, if 12 different crewmembers work for a month each in a year, the crewmember count would be 12 but the annualized job count would be one. On the other hand, if one crewmember works for all 12 months, both the crewmember count and the annualized job count would be one. Shirley (2005) notes that crewmember license data do not contain information about the fishery the crewmember intends to operate in or the vessel on which they intend to work. For this reason, crewmember participation cannot be linked with ADF&G fish ticket data to determine the number of crewmembers on a vessel or in a fishery, and cannot be linked with CFEC's gross earnings files to estimate crewmember' s earnings.[33] A final limitation of the crewmember license file is that crewmembers who are CFEC commercial fishing permit holders in other fisheries are not required to purchase a crewmember license;[34] therefore, they may not appear in the crewmember license data.

Carothers and Sepez (2005) note that the reliability of the ADF&G commercial fishing crewmember license database has long thought to be unreliable because some crew may not purchase licenses (although they are required to) or may purchase a license and then not work, and because of other factors. To test how well the crew license data represent working crew the analysts checked various demographic data extracted from the applications of 272,145 license holders from the 1993-2003 period against a sample of crew from actual working boats, taken from U.S. Coast Guard records of fishing vessel search and rescue incidents (180 crewmembers from 56 vessels during the 1988–2004 period). For those variables that could be compared (age, gender and residence in the primary cities of Anchorage, Kodiak and Seattle), the results from the working-boat sample were statistically similar to the license database results.

Division of Subsistence Community Profile Database

The Subsistence Division of ADF&G has, over the years, conducted a series of surveys of households in rural Alaskan communities in its efforts to document subsistence fish and wildlife harvests in Alaska. At least one study has been conducted for nearly every rural community in Alaska since the study

[32] The suspension of commercial fishing privileges does not apply to a commercial salmon fishery.

[33] The main source of data for CFEC's gross earnings files are the ADF&G fish ticket databases and IPHC's fish ticket database for halibut. CFEC combines all of these databases into a single database with a common format, adds an estimate of gross earnings for each fish ticket item that represents a commercial harvest, adds information on the CFEC permit holder including a unique identifier, and adds a corrected ADF&G vessel number field, which will sometimes differ from the fish ticket vessel number field on the same record. The resulting file makes it easy for researchers to follow persons and vessels across fisheries and across time (Shirley, 2005).

[34] The one exception may be in fisheries for which ADF&G has imposed super-exclusive registration requirements.

program was initiated in the 1980s. The studies generally follow a fixed format and the results are included in a comprehensive Community Profile Database available on-line at www.subsistence.adfg.state.ak.us/geninfo/publctns/cpdb.cfm#USING. Information typically has been gathered in each community through detailed, retrospective in-person interviews conducted in a sample of households. The data are based on responses from all adults in surveyed households (an adult is defined as anyone older than 16 years).

In addition to resource use questions, household respondents typically are asked to provide information about the employment of household members in commercial and wage activities during the previous year (commonly including cash income earned, sources of employment and length of employment). Commercial fishing and other forms of self-employment such as sale of crafts and furs are recorded in the survey. Information on weeks spent in non-wage forms of self-employment such as commercial fishing and commercial trapping are generally not available and are not included in the computations unless indicated in the accompanying comment.

The data describe the level of participation of households in wage employment and other income producing activities, as well as providing information about the character and relative strength of the commercial-wage sector of a community's economy during the study year. The data also provide estimates of numbers of persons employed in various industry sectors, including commercial fishing, and the percentage of total community income generated by each sector. The principal limitation of this employment data source is its sporadic and infrequent coverage. Employment information for most communities is outdated, and time series data are insufficient to detect employment trends.

Commercial Fisheries Entry Commission

Commercial Fishing Permit

In Alaska, a commercial fishing permit (limited entry or interim-use permit) issued by the CFEC entitles the holder to operate gear in a specific commercial fishery in accordance with Board regulations.[35] The term "fishery" refers to a unique combination of fishery resource(s), gear type(s), and area(s). Permits for some species are issued on a statewide basis, while others are valid only for certain areas of the state. Generally, partnerships or corporations can not hold permits; permits must be held by an individual person, and the person named on the permit must be actively involved in the fishing operation. As noted above, any valid CFEC commercial fishing permit may also serve as a crewmember license for the holder to participate as a crewmember in any commercial fishery.

As with the ADF&G commercial fishing crewmember license, the application for the CFEC commercial fishing permit requires information on the applicant's physical location of residence, residency status and Social Security Number. When a commercial fisherman reports a landing on a fish ticket, his or her commercial fishing permit number is stamped on each ADF&G fish ticket and entered into the ADF&G fish ticket database. Thus, information about boat owners/operators is easily linked to an area or fishery using their permit (Shirley, 2005).

The number of permit holders in the CFEC commercial fishing permit file provides an estimate of the number of boat owners/operators in Alaska fisheries. While obtaining a permit is an indication of the intent to fish, a permit may not be actually fished. As a subset of the total number of permit holders, CFEC also collects data on the number of permit holders who actually catch and sell fish with their

[35] Interim-use permits are issued for all commercial fisheries which are not under entry limitation, and to applicants waiting to find out if they qualify for permanent permits.

permits. CFEC permit information, when combined with fish ticket data, can be an important source of data for summary reports on participants in a fishery and their earnings (Shirley, 2005).[36]

What neither the number of permit holders nor the number of active permit holders can tell us, however, is the number of jobs generated by the permits (Patton and Robinson, 2006). Some permit holders may fish during only one month a year, while others may fish during several months. Both will show up in CFEC data as one active permit holder during that year despite the obvious difference in the amount of employment generated by the two permits. What's more, a count of permit holders leaves out another important piece of information: how many jobs, if any, are created for crewmembers hired to help with the harvest (Patton and Robinson, 2006).

Secondary Seafood Harvesting Labor Data

Early Estimates of Seafood Harvesting Labor

The first regional fishing employment estimates for Alaska fisheries were those developed by Rogers et al. (1972). The estimation methodology used by Rogers et al. was developed prior to the inception of CFEC limited entry permits in 1973; instead, ADF&G fish ticket data were exclusively used to estimate harvesting employment by counting the number of units of gear actively fished during the month.[37] Rogers et al. provided monthly estimates of fish harvesting employment by fishery (species and gear) for the period 1965-1970. Employment estimates were determined by multiplying the estimated number of vessels making landings each month by the appropriate crew factor associated with each fishery. The crew factor is an estimated average number of people working on a commercial fishing vessel. For example, a fish ticket recording the landing of salmon in Ketchikan with a purse seine permit would generate 5.2 jobs for the month because that is the average number of crewmembers estimated to be necessary for that gear type in that fishery. The crew factor includes only fishermen (crewmembers and captains) and does not include tender and packer crews or onshore employment. Crew factors were based upon consultation with area fisheries biologists, fishermen and fish processors in each fishery.

Updated time series were published by Rogers et al. (1980) in a report that provided employment and earnings estimates for the period 1969-1976. A slightly modified methodology was used to make the estimates more compatible with nonagricultural wage and salary employment estimates published by the Alaska Department of Labor (later renamed the Alaska Department of Labor and Workforce Development).

In 1983, the Alaska Department of Labor (1983) published a report containing monthly estimates of fish harvesting employment and gross earnings by species, gear and labor market region for the period 1977-1981. The report continued the methodology and time series originally developed by Rogers et al. A major shortcoming of this data was that they did not report the area of residence of persons harvesting a particular fishery resource.[38]

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[36] See Footnote 33 for a description of CFEC's gross earnings files.

[37] The one fishery for which ADF&G fish ticket data were not used to estimate employment was the halibut fishery. The number of persons employed in the halibut fishery by month and region was provided by the International Pacific Halibut Commission.

[38] Focht et al. (1984a) report that another problem with earlier estimates of fish harvesting employment based on the numbers of vessels reporting landings was that the ADF&G fish ticket file was poorly edited, and many data entry errors existed.

In 1984, Focht et al. (1984a, 1984b, 1984c, 1984d, 1984e) of the Commercial Fisheries Entry Commission published a series of reports on fish harvesting employment and gross earnings in Alaska's fisheries that paid particular attention to developing a methodology which would readily allow these estimates to be disaggregated by area of residence (states or census areas) of the participants. The methodology developed included using CFEC commercial fishing permits, ADF&G fish tickets and crew factors developed by the Alaska Department of Labor.

To determine the number of permits that actively participated in a fishery, Focht et al. merged the CFEC commercial fishing permit file with the ADF&G fish ticket file. In this manner the following information can be obtained: number of permits that were fished, time period of the fishery, species fished, gear type used, and area fished. Halibut catch data were obtained from the International Pacific Halibut Commission and were combined with the fish ticket data.

Crew factors developed by the Alaska Department of Labor were used to estimate the number of people employed by each operation. The crew factors were developed from statewide surveys (e.g., Pistoll et al., 1980) and consultations with fishing associations, government agencies, fisheries biologists and individual fishermen.

Within a given month, Focht et al. estimated employment as the number of people engaged in fish harvesting operations. Operations were defined as an individual gear operator (CFEC permit holder) making one or more landings in a particular fishery. Total fish harvesting employment was calculated by multiplying an appropriate crew factor by each unduplicated permit holder landing of a particular species and gear type. In this manner the total number of people who fished for each species using each gear type for each month can be estimated.

The sum of monthly employment does not equal the total number of employees because some people work more than one month in a year. The same technique used for estimating seafood harvesting employment was used to estimate total employees. Rather than counting individual permit holders by month, individual CFEC permit holders were counted for the year. This count was then multiplied by an average crew factor for the fishery that was being counted.

To determine residence Focht et al. utilized the CFEC permit holder's address. Employment from each area was estimated based on the number of gear operators from each area and the crew size for each fishery. The assumption was made that that the residency of the crew is proportional to the permit holders. Focht et al. expected the number of resident crewmembers hired by nonresident skippers would be canceled out by the number of nonresident crewmembers hired by resident skippers.

The authors note that this method provides fairly accurate employment estimates by area of residence, but that the approach is not perfect and that the employment estimates presented are only rough approximations of true fishing employment. For example, if more than one CFEC permit was fished on a vessel, the number of employed would be overestimated. Such instances are likely to occur in operations using relief skippers where each skipper owns a CFEC commercial fishing permit, or in fisheries where anticipation of limited entry provides incentives for crewmembers to purchase CFEC permits and make landings from their skipper's vessel. In these situations, a fishing operation may be double counted resulting in overestimates of fish harvesting employment.

A second assumption of this employment estimation methodology is that all vessels in a fishery using the same gear type would use the same sized crew (Thomas, 1987). The crew factor used in these estimates is an average. If a fishery is going badly, the permit holder could reduce the crew size to reduce operating expenses. A third assumption is that that the fish tickets are error free (Thomas, 1986). Since the estimation methodology is entirely dependent on fish tickets any errors on the fish

tickets are reflected in the estimation numbers either through loss of employment by placing the fishery in a miscellaneous uncounted category or in the wrong category.

In an analysis of Alaska seafood industry employment, Thomas (1986; 1987) used the methodology developed by the Department of Labor and Focht et al. to estimate harvesting employment. To determine harvesting employment by labor market area, the more than 25 salmon, shellfish, and halibut management areas were combined into the following ten study areas: Southeast, Prince William Sound, Cook Inlet, Kodiak, Aleutian Peninsula, Dutch Harbor, Bering-Western Aleutians, Bristol Bay, Wade Hampton-Bethel and Arctic/Yukon/Kuskokwim. These study areas were used to calculate employment numbers. Employment for these areas was then aggregated into the four coastal labor market areas: Southeast, Gulf Coast, Southwest and Northern. The proportion of resident and non-resident seafood harvesting employment was also reported by market area.

Also in the late 1980s, Berman and Hull (1987) and the McDowell Group (1989) quantified the economic impacts of the seafood industry on the economy of the state by measuring employment, labor income and other economic variables. The methodology used for estimating statewide harvesting employment was similar to that developed by the Department of Labor and Focht et al. However, the McDowell Group further refined the method by adding moderate amounts of pre-season preparation and post-season time spent by virtually all skippers and crew. Since they are fully employed in these pre- and post-season periods, this time is included in total employment. The authors note that the result of this refinement is a more realistic measure of harvesting employment. ADF&G fish landing statistics were used to reflect the duration of specific fisheries, and informed estimates were used to extend these defined periods to account for the total duration of fishing employment. Depending on the fishery they participate in, skippers were credited with two to three months of unremunerated labor (one month to six weeks pre-season work and one month to six weeks post-season). Deckhands were generally credited with one month total pre-season and post-season work.

Recent Estimates of Seafood Harvesting Labor

This section discusses recent estimates of seafood harvesting labor.

National Institute for Occupational Safety and Health

As part of NIOSH's injury surveillance and epidemiologic analyses, the agency has calculated the rate of work-related deaths in Alaska's commercial fishing industry from 1991 through 1999 (NIOSH, 2002). The occupational fatality rate is reported as the number of fatalities per 100,000 full-time equivalent (FTE) workers.

The rates in the NIOSH study are based on an estimate of 17,400 full-time employees active in Alaska's commercial fisheries. This estimate of the employment base was assumed constant over the 1991-1999 period. NIOSH's work in determining FTEs included consideration of comparability to commercial fishing FTE rates with other countries and industries. The rates assume that workers are on duty 24 hours a day during the opening of fishing seasons lasting less than 15 days. The rates also credit fishermen with 16-hour work days for seasons that last up to 50 days. However, if a person worked on a vessel for more than 50 days continuously, (i.e., they resided on the vessel), they were only counted as working 8 hours per day. NIOSH notes that the commercial fishing workforce's mean FTE does not adequately measure the amount of time an individual fisherman spends on the water, and that worker's commensurate risk exposure for drowning.

CFEC Permit Holder and Crewmember Counts by Census Area and City of Residence

The total number of CFEC-issued commercial fishing permits and ADF&G-issued commercial fishing crewmember licenses provides an estimate of the number of people employed in commercial fishing. Permit holder and crewmember counts by city of residence and federal census area are posted on the Internet at www.cfec.state.ak.us/fishery_statistics/permits.htm.[39] Currently, count data are available in a tabular format for 2004, 2003, 2002 and 2000.[40] In terms of using these counts as estimates of seafood harvesting labor, the aforementioned limitations of basing estimates on ADF&G commercial fishing crewmember licenses and CFEC commercial fishing permits would apply.

State of Alaska Department of Labor and Workforce Development Employment in the Alaska Fisheries

During the past few years the ADOLWD resumed estimating the number of fish harvesting jobs in Alaska using a methodology similar to that developed earlier by the Department; the results to date are reported in Olson and Robinson (2004) and Patton and Robinson (2006). The series of employment estimates goes back to 2000. The project is funded by the Alaska Fisheries Information Network through a reimbursable services agreement with ADF&G (Shirley, 2005).

The DOLWD employment calculations are based on the landings made by individual CFEC commercial fishing permit holders in Alaska's fisheries. For the purposes of the estimation method, the permit holders are considered employers, and their records of landings indicates employment activity by month in specific fisheries (salmon, herring, crab, halibut, groundfish and miscellaneous shellfish). The landing data information is mainly obtained from ADF&G fish ticket reporting. Because the records of landings do not specify the number of jobs and people involved in the fish harvesting, the ADOLWD created crew factors to estimate the labor needed to fish specific permits, given their associated region, species and gear type. The crew factors were developed based on information from earlier, similar studies, conversations with fishermen and processors, and from staff in the ADOLWD and other departments with broad knowledge on fisheries. In addition a stratified sample of 5,000 permit holders in 117 different fisheries was surveyed. Just over 1,000 permit holders replied and this information was also used in the development of the crew factors. This survey has been developed into an on-going survey.

The crew factor indicated by the permit is applied when a permit holder makes at least one landing in a month, and then number of employment for that fishery that month is estimated. The crew factor is only applied once no matter how many landings are made per month. If someone has several permits and make landings on more than one of them, the permit with the greatest harvest value associated determines which crew factor is activated.

The jobs are assigned by place of work rather than by the employee's residence. Most of the permits issued have a geographic designation to where specific species can be harvested and with what type of gear. Permits that allow for harvesting anywhere in the state assign employment by a special harvest area code. The ADOLWD estimates divide employment into the following regions: Gulf of Alaska, Northern, Southeast and Southwest. Employment data are annualized so a job that lasts all 12 months of the year is counted as one job, a job that lasts six months is counted as 0.5, and so forth.

Patton and Robinson (2006) list two reasons why its estimates might undercount fishing employment. First, the time spent for preparations and for completing operations at the end of the season, until the

[39] Although data are reported by community and census area, these data are not cross-referenced to the Permanent Fund Dividend data base to verify residency.

[40] Due to problems with the crew data the 2001 table is unavailable.

permit holder makes a landing, is not counted. To address this limitation the ADOLWD has started surveying permit holders to find out how much time is spent on preparations in each fishery. This time will be included in future estimates. Secondly, only one "set" of jobs was counted in a calendar month for each permit holder. When a permit holder makes landings under two different permits in one month, only the permit with the highest value catch is assigned employment in that month. The assumption is that crewmembers who work for the same permit holders and fish different fisheries in the same month are analogous to employees who perform different duties for one employer during a month. This assumption ignores the fact that some permit holders may hire different crewmembers to fish their different permits. Since crewmembers are not specifically identified in the fish tickets that record landing data, turnover of this type can't be captured.

Another limitation of the ADOLWD fishing employment estimates is that do not provide insight into the residency of the job holders; as noted above, jobs are counted by place of work and the focus is on the number of workers employed during a given time period rather than the identity or characteristics of the workers themselves (Olson and Robinson, 2004).

Northern Economics, Inc.

Economic Impact of the Seafood Industry on Alaska's Economy

Northern Economics, Inc. (2003) updated previous estimates of the value of Alaska's seafood industry to the state and regional economies. The analysis included an estimate of jobs provided in Alaska's seafood harvesting and processing sectors in 2001. The method of employment estimation was to multiply the number of CFEC commercial fishing permits by the average number of persons employed per permit. Estimates of the average number of employees per permit were based on expert opinion (e.g., Bruno, 2002) and groundfish fishery logbook data collected by NMFS.

The estimated number of jobs in the harvesting sector represent FTE jobs. The FTE number was calculated by dividing the total working hours spent by all persons by 2,080 (the total number of hours in a standard work year). The number of persons participating in harvesting activities for each fishery was adjusted to account for the length of season and time engaged in maintenance, gear repair and other activities prior to and after each season. Addresses listed in CFEC commercial fishing permit and ADF&G commercial fishing crewmember license applications were used to determine region/state of residency. State/federal/joint fishery employment percentages were allocated based on the estimated ex-vessel values for each jurisdiction.

The analysis separately estimated the employment generated by harvesting activities in six Alaska regions and in federal, state, and jointly regulated fisheries, and the employment associated with harvesting the major species harvested in the waters off Alaska.[41]

Sector and Regional Profiles of the North Pacific Groundfish Fisheries – 2001

Northern Economics, Inc. and EDAW, Inc. (2001) estimated harvesting employment in federal groundfish fisheries off Alaska. NMFS provided information on the average crew size of catcher/processors and motherships based on logbook data and information on the number of weeks that each vessel was active. Multiplying crew size by the number of active weeks provided an estimate of the number of crewmember weeks for each vessel. Assuming a work year of 52 weeks,

[41] The major species are crab and other shellfish, flatfish, halibut, herring, Pacific cod, pollock, other groundfish (including Atka mackerel, rock fish, sablefish, and other groundfish), and salmon.

crewmember weeks were translated into an estimate of FTE employment. These estimates were increased by five percent to account for shore-side office staff.

Estimates of employment on catcher vessels were derived from previous studies of crew size for various vessel types and from interviews with industry representatives. Estimates of employment for a particular catcher vessel class were made by multiplying the crew size estimate by the number of active vessels in the class during each month. Crewmember months were converted to crewmember hours by assuming that crewmembers work an average of 16 hours per day for an average of 15 days in every month their vessel is active. The total number of estimated crewmember hours was then divided by 2,080 hours to obtain an estimate of FTE employment. Employment (vessel and corporate office staff) for catcher processors, motherships and catcher vessels was allocated to the region of the vessel owner's residence.

Importance of Salmon to the Aleutians East Borough

In a study of the economic significance of salmon fisheries in the Aleutians East Borough, Northern Economics, Inc. (1999) developed estimates of AEB resident and nonresident employment in Area M commercial salmon fisheries. Its method of estimation was to multiply the number of CFEC commercial fishing permits making landings in Area M by the average number of persons employed per permit (including the permit holder, who was assumed to be the vessel owner). Estimates of the average number of employees per permit were based on interviews conducted by Northern Economics, Inc. with participants in each of four vessel classes. The estimates make the assumption that all crewmembers on representative vessels in fisheries that do not involve salmon were also crewmembers or permit holders in salmon fisheries.

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Work Group Primer Follows.

The Seafood Harvesting Labor Data Project: The Work Group Primer

Prepared for the

Southwest Alaska Municipal Conference

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1 Introduction

This document is a primer on the Seafood Harvesting Labor Data Project. The purpose of this primer is to provide participants in the Seafood Harvesting Labor Data Workshop background information that will enhance participation and discussion during the workshop. The primer contains the following sections:

- Problem statement and project objective
- Summary existing data and data collection processes
- Summary of the means that are currently employed to estimated crew member activity
- Summary of potential solutions
- Summary of workshop goals and objectives

2 Problem Statement and Project Objective

Alaska's seafood harvesting and processing sector provides more direct jobs than oil and gas, mining, agriculture, and forestry combined (Northern Economics, Inc. 2003). In some regions of the State, such as the Aleutians and Pribilof Islands, Bristol Bay, and Kodiak regions, jobs in the seafood industry account for around half of all employment.

In spite of the importance of this sector the current labor data collection system does not allow for an accurate accounting of the number of crew harvesting jobs that are created. All of the numbers regarding harvesting jobs in the industry are at best reasoned estimates, but more typically they are wild guesses. In a recent article the Anchorage Daily News (Loy, Wesley 2006), stated that at *"the height of the summer season, more than 20,000 commercial fishermen chase salmon and other types of fish,...."* This number is derived from an estimated developed by Alaska Department of Labor and Workforce Development. In reality there are no data that actually count the number of fish harvesters in Alaska. There are data that count the number of fish processing workers in each borough and indicate the total and average wages earned. There are also data that provide counts of the number of active permit holders at any time any over the course of the year along with data that indicate total landings and revenue generated by that activity (as well as the permit holder's name and place of residence). There are similar data for owners of active fishing vessels. But there are no data that provide counts of the number of active fishing crew members, no data that relate individual crew members to particular fisheries or vessels, and no data that link active crew members to particular communities.

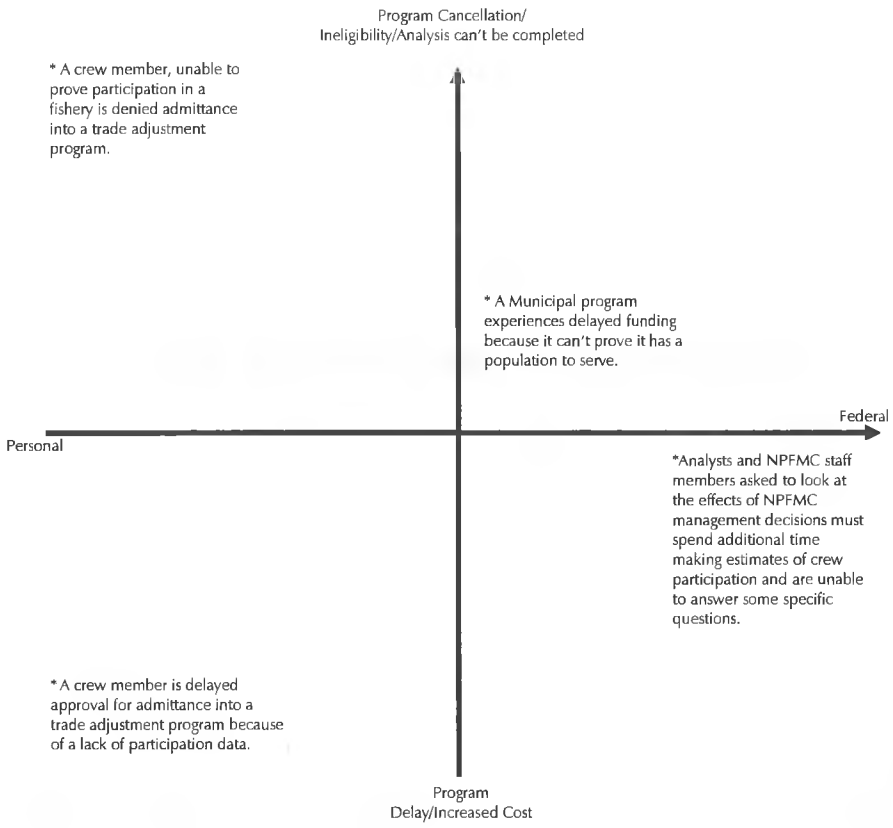
In short there is no reliable way to say with any degree of certainty how many people actually earn some part of their livelihood from participating on fishing crews in Alaska, nor can we say who those people are and where those people live.

The primary objective of the Seafood Harvesting Labor Data Project is to create a harvesting crew member data collection system that will allow accurate reporting of the participation of active individual crew members by community, provide an indication of the level of participation on a fishery by fishery basis, and determine the relative quality of seafood harvesting jobs over time.

The potential effects associated with a lack of reliable data on crew members range from the personal level all the way to the Federal level and the magnitude of these effects can stretch from increased costs and program delay to program cancellation and the inability to answer certain questions. Figure 1 shows hypothetical examples of the potential range of effects of not having specific crew data. The vertical axis measures the magnitude of the disruption (e.g., program delay to program cancellation)

while the horizontal axis measures the distribution of the effect (e.g., personal to Federal). The further right and up an effect is listed the magnitude and breadth of the potential disruption.

Figure 1. Examples of the Potential Range of Effects



The following paragraphs briefly describe several real world examples of how the lack of an effective harvesting crew member data system has affected various agencies and stakeholders.

Trade Programs: The Trade Adjustment Assistance Act of 2002 authorized training benefits for Alaska salmon fishermen who received lower incomes because of imported salmon. In some cases, crew members who wanted to take advantage of the program found themselves shut out because they couldn't prove that their employment and income was effected by foreign farmed salmon or that they were Alaska salmon fishermen. No one argued with the fact that prices for wild salmon had been affected, but making a claim based on employment was made very difficult by the lack of seafood harvesting data.

Grant Applications: Federal and State grant application processes often require counts of the target populations to be served by proposed program or proof that prior grants have resulted in increasing jobs or job retention. For example, job creation and retention are the top criteria for the Economic Development Administration and USDA Rural Development, two of the most frequent funders in fisheries-dependent communities. However, currently collected public data does not count crew members in employment estimates and the lack of tracking system for crew members means that when programs do create jobs by keeping commercial fishing permits in the area there is no legal proof that these program also result in increased local crew employment.

Fisheries Management and Research: The lack of crew data means that researchers and fisheries managers must employ "best estimate" methods. For example, as noted by Knapp, 2006 the quality of information available to estimate the change in number of jobs and days works for Kodiak-based crab fisherman because of the 2005 BSAI Crab Rationalization was quite low because there was "no reliable data on where crew live, or "average days spent in transit, in port between landings, or working for vessels before or after the season."

3 Existing Seafood Harvesting Labor Data Collection

This section summarizes the existing seafood harvesting labor data collection system. The section is divided into two parts that 1) describe the system, and 2) discuss the system's shortcomings.

3.1 The Existing Seafood Harvesting Labor Data Collection System

The existing seafood harvesting labor data collection system has a number of components which provide different levels of information across different fisheries. At the heart of this system is the State commercial fishing regulations which require any person engaged in commercial fishing to hold an Alaska Department of Fish and Game (ADF&G) commercial fishing crewmember license or to a current Commercial Fishing Entry Commission (CFEC) commercial fishing permit (limited entry or interim-use permit).[1] According to state regulations, the term "commercial fisherman" means an individual who fishes commercially for, takes or attempts to take fish, shellfish or other fishery resources of the state by any means, and includes every individual aboard a boat operated for fishing purposes who participates directly or indirectly in the taking of these raw fishery products, whether participation is on shares or as an employee or otherwise. Crewmembers that do not directly or indirectly participate in the taking, such as vessel cooks and engineers, are included in the definition. However, many of these crewmembers also pull double duty as harvesting crewmembers. In addition, the definition includes the crews of tenders or other floating craft used in transporting fish to land and offshore processors. However, the definition does not apply to anyone aboard a licensed vessel as a visitor or guest who does not directly or indirectly participate in the taking. Processing workers aboard catcher/processors are also excluded in the definition.

ADF&G commercial fishing crewmember licenses are available for purchase at the same outlets that sell recreational fishing and hunting licenses, and are issued in a similar format. The forms are filled out by the vender in duplicate and a paper license is issued to the applicant on the spot, with the original sent to ADF&G for eventual entry into the ADF&G fishing and hunting license database. The application for the ADF&G commercial fishing crewmember license requires information on the applicant's physical location of residence (city/state/zip code), their Social Security Number (SSN), and their residency status (Alaska resident/nonresident and U.S. citizen/alien).[2] However, because a person's SSN also allows access to an individual's financial information, distribution and use of SSN's are strictly limited to state agency personnel.

The ease of obtaining an ADF&G crewmember license and their wide availability—they may be obtained in nearly every community in Alaska—are important positive attributes of the current system. Fishing crew members are often hired at the docks on very short notice, and often for very limited periods. They need to be able to obtain licenses quickly and easily, and the current system facilitates these hiring practices.

[1] All current CFEC Permit Holders are exempt from the requirement to hold a current ADF&G crewmember license.

[2] Notwithstanding the requirement to include their SSN licenses are in fact issued to persons that do not report their SSN.

With the current ADF&G crewmember data, in combination with CFEC permit holder data, it is possible to determine the number of people who are eligible to work in the fisheries as crewmembers in a given year. CFEC has developed these estimates for years 2000 and 2002 – 2005. These reports may be accessed electronically (http://www.cfec.state.ak.us/fishery_statistics/permits.htm). Due to problems with the data, the reports are unavailable for 2001. While the CFEC reports allow the users to estimate the upper bound of the number of persons engaged in commercial fishing in any community or in all Alaska fisheries, it is not possible to determine whether a particular license holder actually participated in any fishery. Table 1 shows the CFEC permit holder and crew member counts for 2005. Not counting ADF&G license holders that did not report their SSNs, a total of 30,649 persons were eligible to participate in harvesting activities in Alaska fisheries in 2005. Of these 19,940 were Alaskans, and 10,709 were non-Alaskans.

Table 1. CFEC Permit Holder and Crew Member Counts, 2005

Borough or Census Area	CFEC Permits	ADF&G Licenses	All
Aleutians East Borough	203	222	425
Aleutians West Census Area	99	243	342
Anchorage Mun	873	1,015	1,888
Bethel Census Area	1,104	654	1,758
Bristol Bay Borough	179	172	351
Denali Borough	3	2	5
Dillingham Census Area	645	643	1,288
Fairbanks North Star Borough	138	67	205
Haines Borough	114	85	199
Juneau City And Borough	454	346	800
Kenai Peninsula Borough	1,396	1,463	2,859
Ketchikan Gateway Borough	348	296	644
Kodiak Island Borough	680	801	1,481
Lake And Peninsula Borough	173	273	446
Matanuska-Susitna Borough	256	279	535
Nome Census Area	230	151	381
North Slope Borough	9	5	14
Northwest Arctic Borough	149	58	207
Prince Of Wales-Outer Ketchikan Census Area	352	295	647
Sitka City And Borough	574	531	1,105
Skagway-Hoonah-Angoon Census Area	250	147	397
Southeast Fairbanks Census Area	19	14	33
Valdez-Cordova Census Area	414	391	805
Wade Hampton Census Area	642	643	1,285
Wrangell-Petersburg Census Area	790	617	1,407
Yakutat City And Borough	161	45	206
Yukon-Koyukuk Census Area	143	15	158
Unknown Ak	69	0	69
Alaska Total	**10,467**	**9,473**	**19,940**
Non-Resident Total	**3,634**	**7,075**	**10,709**
Overall Total	**14,101**	**16,548**	**30,649**

Note: ADF&G license holders that did not report their SSN are excluded from this report.
Source: CFEC Permit Holder and Crew Member Counts at www.cfec.state.ak.us/cpbycen/2005/Mnu.htm. Accessed on November 1, 2006.

3.2 Shortcomings of Commercial Crew License Data System

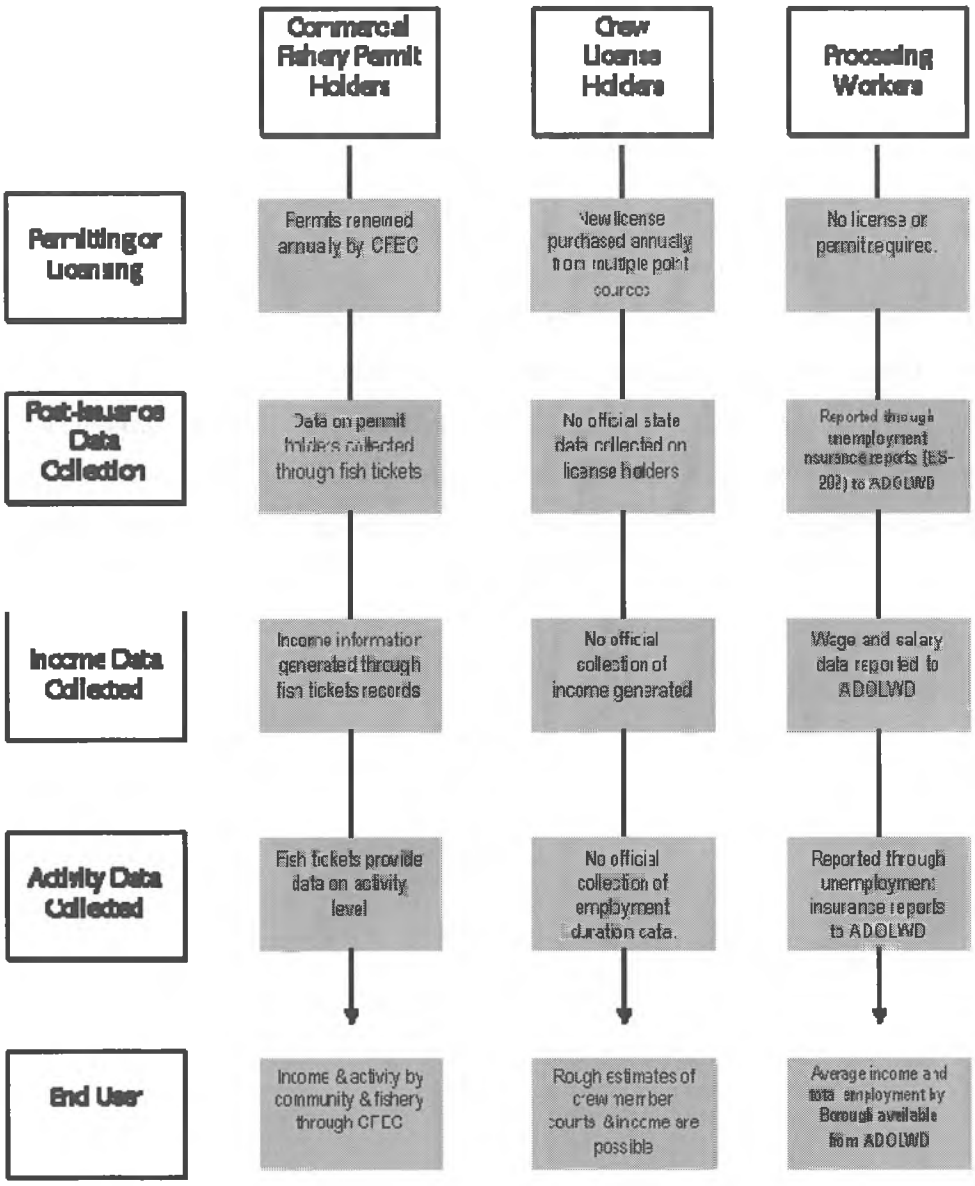
From a data perspective, there are three principle shortcomings of the ADF&G crewmember license system: 1) Licenses are issued annually—there is no linkage between previously issued licenses and currently issued licenses; 2) Once the license is issued there is no mechanism for reporting whether the holder actually participated in the fishery; 3) there is limited demographic data collected

As shown in Figure 2, the data flow for crewmember licenses is substantially different for the other major groups of individuals involved in harvesting seafood and results in less overall information being available to the end user. For example, individuals working in Alaska's shorebased fish processing sector are wage-and-salary employees. This classification means that the number of processing jobs is recorded in the annual average monthly employment statistics reported by the Alaska Department of Labor and Workforce Development. Commercial fish harvesters are exempted from unemployment insurance and other employment reporting requirements because these crewmembers are classified as self-employed. Consequently detailed information on harvesting workers is generally not available for most Alaskan fisheries. Currently, we know the number of crew license holders by community each year. We do not know:

- The number of active crew license holders by community or in total each year;
- The number of active crew license holders by fishery;
- The number of days active crew license holders work in total, by community, or by fishery;
- The wage and income of active crew license holders in total, by community or by fishery;

At the same time, we know this information for permit holders. Hence, there is an asymmetrical flow of data between commercial permit holders and commercial crew license holders.

Figure 2. Seafood Harvesting and Processing Data Flow[3]



3.2.1 Annual Issuance

The fact that licenses are issued annually and there is no link between previously issued licenses and current licenses, significantly increases data entry requirements and makes it very difficult to track license holders over time. This also limits the general usefulness of the data because in order to track license data accurately a unique identifier is required. With crewmembers, the SSN is the only unique identifier available, but because a person's SSN is highly confidential it cannot be provided to persons outside the state agencies responsible for management. If licenses were renewed annually, the overall data entry burden could be reduced, and individuals could be permanently associated with a single

[3] We note that confidentiality rules affect the development of aggregate reporting standards by community, fishery, borough or census area.

unique license identifier. This would allow significantly wider use of license data even if other data shortcomings are not overcome.

3.2.2 No Mechanism for Reporting Activity

Any individual with a valid ADF&G crew member license is eligible to be a member of a harvesting crew for any commercial fish harvesting operation in Alaska. In addition, any individual with a valid CFEC commercial fishing permit is also eligible to participate as a harvesting crew member. Currently however, there is no mechanism for reporting activity. While regulations require that all landings and revenues be reported by vessel and by permit holder, there are no regulations that require members of the crew to be identified or reported. In part the lack of a reporting requirement is due to the fact that fish harvesting crews are hired as self-employed contractors rather than as wage or salaries employees. In general, state and federal regulations require businesses to identify their wage and salary employees by SSN and place of residence and to report their earnings every quarter.[4] There is no similar requirement for employers to report contract workers, and because harvesting crew members are self-employed contractors, there is no reporting of harvesting crew.

4 Summary of Currently Employed Means to Estimate Crew Member Activity

This section summarizes recent efforts of the Alaska Department of Labor and Workforce Development (ADOLWD) and the National Marine Fisheries Service (NMFS) to estimate Alaska fish harvesting employment. It should be noted that this summary is not comprehensive, and looks only at the selected efforts of ADOLWD and NMFS. Other agencies and stakeholder groups have ongoing processes or have undertaken studies to estimate commercial fish harvesting employment.

4.1 ADOLWD Crew Factor Estimation Process

During the past few years the Alaska Department of Labor and Workforce Development (ADOLWD) has estimated the number of fish harvesting jobs in Alaska using a methodology similar to that developed by ADOLWD in earlier efforts; the results to date are reported in Olson and Robinson (2004) and Patton and Robinson (2006). The series of employment estimates goes back to 2000.

The ADOLWD employment calculations are based on the landings made by individual CFEC commercial fishing permit holders in Alaska's fisheries. For the purposes of the estimation method, the permit holders are considered employers, and their records of landings indicates employment activity by month in specific fisheries. The landing data information is primarily obtained from ADF&G fish ticket reporting. Because the records of landings do not specify the number of jobs and people involved in the fish harvesting, the ADOLWD used a "crew factor" methodology to estimate the average labor needed to fish specific permits, given their associated region, species and gear type. For example the crew factor for a Bristol Bay Drift Gillnet permit might be 2.5, while the crew factor for Bering Sea King Crab permit might be 6.7. The ADOLWD crew factors include the permit holder.

ADOLWD developed crew factors based on information from earlier, similar studies, conversations with fishermen and processors, and from staff in the ADOLWD and other departments with broad knowledge on fisheries. In addition a stratified sample of 5,000 permit holders in 117 different fisheries was surveyed. Just over 1,000 permit holders replied and this information was also used in

[4] Businesses report employees every quarter by submitting an ES-202 report to the Department of Labor for the state in which they operate.

the development of the crew factors. The original survey has evolved into an on-going survey process that will regularly update crew factor estimates for all Alaska fishery types.

In ADOLWD's process for estimating monthly employment, the crew factor indicated by the permit is applied when a permit holder makes at least one landing in a month. The crew factor is only applied once no matter how many landings are made per month. The total employment in each fishery is then calculated by multiplying the number of active permits by crew factor. When estimating total employment over all fisheries, ADOLWD's methodology attempts to reduce double counting that could occur if someone has several permits and makes landings on more than one of them. In these cases, the permit with the greatest associated harvest value determines which crew factor is activated for that particular permit holder.

ADOLWD assigns crew member jobs to the place of work rather than the employee's residence. Most of the permits issued have a geographic designation to where specific species can be harvested and with what type of gear. For example the Area M seine salmon fishery takes place off the coast of the Aleutians East Borough, and thus the jobs generated in the Area M seine salmon fishery are assigned to the Aleutians East Borough. For permits that allow for harvesting anywhere in the state, ADOLWD assigns employment using a special harvest area code that denotes that general area in which fish were harvested.

ADOLWD also estimates annual employment fish harvesting operations. These estimates annualized crew factors based on the number of months a given permit is active. Thus, if a permit is active all 12 months of the year, the crew factor for that permit is multiplied by 1. Alternatively, if a permit is active for six months the crew factor is multiplied by 0.5, and so forth. As with total monthly estimates, the permit with the greatest associated value is used for permit holders with landing on multiple permits in any month.

Patton and Robinson (2006) list two reasons why ADOLWD's estimates might undercount fishing employment. First, the time spent for preparations and for completing operations at the end of the season, until the permit holder makes a landing, is not counted. To address this limitation the ADOLWD has started surveying permit holders to find out how much time is spent on preparations in each fishery. This time will be included in future estimates. Secondly, when a permit holder makes landings under two different permits in one month, only the permit with the highest value catch is assigned employment in that month. The assumption is that crewmembers who work for the same permit holders and fish different fisheries in the same month are analogous to employees who perform different duties for one employer during a month. This assumption ignores the fact that some permit holders may hire different crew members to fish their different permits. Since crewmembers are not specifically identified in the fish tickets that record landing data, turnover of this type can't be captured.

Another limitation of the past ADOLWD fishing employment estimates is that they do not provide insight into the residency of the job holders; as noted above, jobs are counted by place of work and the focus is on the number of workers employed during a given time period rather than the identity or characteristics of the workers themselves (Olson and Robinson, 2004). This residency limitation is also common within other estimation efforts. For example, in work prepared by Northern Economics, Inc. the analyses often assume that permit holders from rural Alaska hire crew members from the same community as the permit holder.

We note that ADOLWD has enacted changes in its estimation program over the past year including defining the permit as the employer rather than the permit holder. Thus, if a permit holder makes landings under two different permits in the same calendar month, each landing will generate a set of jobs. Previously we figured out which landing generated the highest earnings and counted a set of

jobs (i.e., applied the crew factor) only for that one. We will explore these changes further in the work group session and in the final report for the project.

4.2 Efforts by NMFS to Collect Employment Data

In the last several years NMFS has initiated several other primary data collection efforts that provide more information on crew labor efforts. However, none of these systems provide information across all of Alaska's fisheries. That said, it is possible that an approach to solving some of the issue with the current statewide reporting system could be found within these efforts. These systems include:

- Bering Sea and Aleutian Islands and Gulf of Alaska Groundfish Catch Accounting System
- Interagency Electronic Reporting System
- Bering Sea and Aleutian Islands Crab Fisheries Economic Data Report
- Commercial Fisheries Employment Survey
- Regional Economic Data Collection Program for Southwest Alaska

The employment data collection and estimation processes included in these programs are all discussed in the sections below.

4.2.1 Bering Sea and Aleutian Islands and Gulf of Alaska Groundfish Catch Accounting System

NMFS recordkeeping and reporting requirements require reports from vessels participating in groundfish fisheries in the U.S. Exclusive Economic Zone (EEZ) off Alaska (50 C.F.R. 679.5). Catcher vessels with a length overall of greater than 60 feet must complete a Groundfish Daily Fishing Logbook (DFL), while catcher/processors and motherships receiving groundfish must complete a Daily Cumulative Production Logbook (DCPL). Data required to be reported by vessel owners or operators include the number of crew, excluding certified observer(s), on the last day of the weekly reporting period in a mothership or catcher/processor DCPL; and in the DFL on the last day of a trip for a catcher vessel.[5]

NMFS currently operates an electronic reporting (ER) system for collection of weekly production reports (which summarize logbook data) from the groundfish fisheries (NMFS Alaska Regional Office, 2006b). The ER system allows catcher/processors and motherships to submit weekly production reports via e-mail or direct from a modem from their computer on board.[6] The benefits of the ER system include improved data quality, automated processing of data, improved process for correcting or updating information, and more timely data available to fishery managers. The ER system is gradually being replaced by the Interagency Electronic Reporting System described below. The switch between data reporting systems will become mandatory sometime in 2007 (Ackley, 2006).

[5] In general, NMFS does not enter logbook data submitted by harvesters and processors into electronic databases. Logbook data are available in hard-copy format and are often used in enforcement cases or in specialized in-house research projects.

[6] The ER system consists of two principal components (NMFS Alaska Regional Office, 2006b). The ER Client software is used by personnel on a vessel to enter data and transmit data to NMFS. The ER Host software runs at the NMFS Alaska Regional Office in Juneau. The ER Host system receives and logs transmitted files, validates the data, loads the data into an Oracle database, and sends a return receipt report to the vessel or processing plant informing them of the status of their submission.

4.2.2 Interagency Electronic Reporting System

Recently, an electronic data reporting system, called the Interagency Electronic Reporting System or eLandings, was developed through a collaborative effort by NMFS, ADF&G and the International Pacific Halibut Commission, with funding from the Pacific States Marine Fisheries Commission (NMFS Alaska Regional Office, 2006c; State of Alaska, 2006). The goal of the joint effort is to develop a single, Internet-based reporting system for Alaska fisheries. The eLandings system is designed to eliminate reporting duplication and increase efficiency for harvesters, processors and fishery managers. To use the system a computer and printer and an Internet connection with e-mail are required. In addition, users must request authorization and reserve a particular UserID and password. The system allows users to submit their landing report data (i.e. fish tickets and other required processing reports) to all mandated agencies through a series of eLandings Web pages.

The eLandings system was first used in 2005 in the Aleutian Island's Western and Eastern golden king crab fisheries. Currently, eLandings is used to report landings and/or production data for the IFQ/CDQ crab and Community of Adak golden king crab, halibut and sablefish IFQ and state-wide groundfish fisheries. In the future, the system will be expanded to include landings and production data reports for shellfish, salmon, herring and other Alaska fisheries.

Data reported in the eLandings reporting process include ADF&G fish ticket record information,[7] IFQ fisher/processor quota harvest and processor production information. In addition, reported data include the total number of crew (including skippers) on-board the vessel.

4.2.3 Bering Sea and Aleutian Islands Crab Fisheries Economic Data Report

Beginning in the August 2005, NMFS is requiring an annual Economic Data Report (EDR) from any owner or leaseholder of a vessel that harvested or processed crab in the Bering Sea and Aleutian Islands (BSAI) crab fisheries managed under the IFQ/IPQ program (50 C.F.R. 680). The purpose of the data collection program is to collect the employment, cost and sales data necessary to adequately examine how vessel and processing plants are affected by the BSAI crab rationalization program. The following information is recorded for crew who harvest crab and whose pay is based primarily on their harvesting work: 1) the number of crew aboard the vessel (excluding captain) who provided crab harvesting labor; 2) the total payment made to crew (excluding the captain) for their crab harvesting labor; and 3) the total payment made to the captain for his services. The total payment to the crew and captain is the amount actually paid, not the earnings before shared expenses (such as fuel, bait, or food and provisions) are deducted. Any payments to the captain or crew for their IFQ are excluded.

In addition, the report records the ADF&G commercial fishing crewmember license number or CFEC commercial fishing permit number for each vessel employee participating in any or all BSAI crab fisheries and lists the employee's location (city/state) of residence. For employees that do not have ADF&G crewmember licenses or CFEC fishing permits (processing crew for example), the report records the location (city/state/country) of residence and the number of employees that are from each residential location.

[7] ADF&G fish tickets are filled out by the processor for each vessel that delivers fish to that processor. Data reported on the fish ticket include ADF&G vessel number, CFEC commercial fishing permit information, date fishing began, date landed, gear type, ADF&G statistical area where fish were harvested, landed weight (in pounds) and condition of the catch by species, weight (in pounds) of discards at sea and at the dock, number and type of prohibited species discarded at sea, price paid/received per pound for the recorded weight, and monetary amount paid/received. A fish ticket is considered a legal document and requires the signature of the vessel captain or operator and the buyer.

All data are collected and held by the Pacific States Marine Fisheries Commission (PSMFC). PSMFC abides by all statutory and regulatory data confidentiality requirements, and only releases the data to NMFS, North Pacific Fishery Management Council staff and any other authorized users in a "blind" format. Specifically, all identifiers associated with data submitters are eliminated and replaced with fictitious vessel and processor identifiers for purposes of analyses. Participation in the data collection program is mandatory for all participants in the BSAI crab fisheries. Should participants fail to submit the EDR, NMFS is authorized to withhold issuance or transfer of IPQ or IFQ.

4.2.4 Commercial Fisheries Employment Survey

In 2003, the national offices of NMFS developed the Commercial Fisheries Employment Survey, which is designed to collect employment data for use in descriptive analyses of the economic significance of the commercial fish harvesting sector from all US states and territories (Office of Management and Budget, 2003). The voluntary mail survey was initially fielded in spring 2004 and ran through the summer of that year (Curtis, 2006). Due to a low response rate NMFS opted to conduct a phone survey to detect potential non-response bias (i.e., bias introduced because those who responded were systematically different from those who did not). The phone survey also had the effect of bumping up the response rate significantly (the final overall response rate was 50%).

The survey sampled from the entire population of U.S. commercial fishing vessels (with the exception of Puerto Rico and the U.S. Virgin Islands). The potential respondent universe was any commercial fishing vessel that (1) holds a federal or state permit or license; and (2) participated in fishing activity in either state or federal waters in 2003.

The mail-out questionnaire asked each vessel owner or captain to report, for the calendar year 2003, the average number of crew taken on a trip and the number of days fished in each 2-month period in each fishery. This will allow for the estimation of: the total number of crewmembers employed (annually and by month) in all U.S. commercial fisheries; the total number of crewmembers employed by fishery (annually and by month); and the total number of days of employment by fishery and across all fisheries. Depending on the other information available regarding each vessel, it should also be possible to provide estimates of full- and part-time employment by state or by vessel characteristics such as gear type. The results of the survey are still being analyzed (Curtis, 2006).

One of the major limitations of the survey is that it will only provide a one-year snapshot of the employment situation in U.S. commercial fisheries. Repeated surveys would allow one to examine evolving trends in commercial fishing employment, but high costs may preclude the frequent administration of surveys (the proposed budget for the contract to conduct the survey in FY04 was $175,000). Another limitation with the NMFS survey and other voluntary surveys is alluded to above—the potential for a high level of non-response. According to Curtis (2006), NMFS is currently reviewing the accuracy of the survey results given the early non-response problem.

4.2.5 Regional Economic Data Collection Program for Southwest Alaska

NMFS is proposing to undertake a survey effort in 2007 to collect data required for a regional economic analysis associated with Southwest Alaska fisheries (71 FR 53668, September 12, 2006). The one-time mail-out survey will request data on employment and labor income from 2,200 vessel owners whose boats delivered fish to processors in Southwest Alaska. NMFS has hired contractors at the University of Alaska Fairbanks to conduct the data collection project (NMFS Alaska Regional Office, 2006d). Since the contractors are concerned about the low response rate of a voluntary survey, they will use an approach slightly different from those used by previous data collection studies. First, for gathering information on employment and earnings, they will rely on the survey of vessel

owners. Second, for gathering information on costs of intermediate inputs used on harvesting vessels, they will survey the suppliers of the inputs rather than the vessels owners. This approach will allow the number of questions on the voluntary survey to be minimized, which will help to increase the response rate.

5 Preliminary Options to Improve Harvest Employment Data

This section introduces a preliminary set of options that could be used to improve employment data for the commercial fish harvesting sector in Alaska. The goal in developing these preliminary options is to develop a basis for discussion. These options have been developed by solely by Northern Economics for discussion purposes. It should also be emphasized that none of the options presented here, have been vetted or pre-approved by any agency or stakeholder group. Finally it should be noted that in presenting these options Northern Economics does not imply that the options are necessarily feasible or practicable, nor should it be inferred that no other options are possible. We encourage workshop participants to review the options that are presented; to think through the pros and cons of each; and to create new options that might create a better harvesting crew database.

The set of preliminary options are divided into two general categories: 1) Options that will improve the ADF&G Commercial Crew License data, 2) Options that will report activities of fishing crew members, including both ADG&G license holders and CFEC permit holders acting as crew.

5.1 Preliminary Options to Improve ADF&G Commercial Crew License Data

This section presents options to improve the ADF&G Commercial Crew License Data. As indicated in previous discussions, licenses are issued by venders throughout the state who complete a hand-written form with duplicates. A copy is issued to the individual as their license and the original is submitted to the state. This system is effective in that it allows licenses to be issued instantly. However, because the data are completed by hand by many hundreds of venders, and because information verification requirements are minimal, entering and using the data in an electronic database is problematic.

Option 1.1 Maintain the existing ADF&G Commercial Crew License System: As indicated in previous discussions, all licenses are issued annually by venders throughout the state who complete a hand-written form with duplicates. A copy is issued to the individual as their license and the original is submitted to the state. Each license issued has is pre-printed with unique number for that particular year, and therefore each individual receives a unique license number. This system is effective in that it allows licenses to be issued instantly in nearly any community in the Alaska. However, because the data are completed by hand by many hundreds of venders, and because information verification requirements are minimal, entering and using the data in an electronic database is problematic.

Option 1.2 Change to a Renewable License System: Under this option individuals would be issued a renewable license with a unique and non-transferable license number. It is presumed that this license number would be generated by the same system that generates CFEC Permit IDs. Once a license is associated with an individual, that ID number would be permanently associated with the individual, whether the number is associated with a crew member license or with a CFEC permit. Each license holder would be issued semi-permanent license card which presumably would include a magnetic data strip.

Crew licenses would be renewed in the same manner that CFEC Permits are renewed. New licenses would still be available and could be issued using the same or similar system that

currently exists. New paper-copy licenses would be valid only until such time as a permanent license card could be issued. In order to encourage existing license holder to renew their licenses in a timely manner, it is anticipated that the price of new licenses (or duplicate licenses) would be considerably higher than the cost of a license renewal. Another option would be to issue multi-year licenses.

Option 1.3 Create a Computerized Real-Time License Issuance System: This option would re-vamp the current system used to issue commercial fishing licenses, and because they utilize the same issuance system would incidentally re-vamp the system for issuing recreational fishing and hunting licenses. The new system would be similar to the licensing system used by the Oregon Department of Fish and Wildlife.

In this system, all license venders would be issued a computer that connects electronically the license database. When individuals request to purchase a license, they are asked to provide either, if they have purchased a license in the past and to provide positive identification (e.g. a valid driver's license with photo id, a passport, etc). The information would then posted to the database, and if a match is returned to an existing entry the purchaser would be asked to verify and update the information in the database and the license is renewed with the same license ID as in previous years. If no match is found, then all of the information for a new license would be collected and verified by the vender, and entered directly into the database. In either case (new license or license renewal) the system would print the licensee's information including bar-coded or magnetic data onto a semi-permanent card, similar to those used for pre-paid calling cards.

Given the number of licenses that would be issued or renewed annually, it is likely that license fees coupled with reductions in data entry costs would likely be able pay for this type of system within a few years.

5.2 Preliminary Options That Will Report Activities of Fishing Crew Members

Option 2.1 Maintain the status quo: Under this option no changes would be made to enhance reporting of activities of fishing crew members.

Option 2.2 Require all crew members and permit holders to complete and submit an "Alaska Crewmember Activity Form" at the end of each fishing year: The form would ask all crew members and permit holders to indicate the fisheries in which they participated as crew members, the vessel on which participated and the number of trips they took. A hypothetical version of an "Alaska Crewmember Activity Form" is shown in Table 2.

The Alaska Crewmember Activity Form (hereafter the form) would be available online, and it would also be mailed to each licensee and permit holder at some point late in the year. In order to ensure that the form is submitted by all licensees and permit holders, the regulations would indicate that the licensee or permit holder would be penalized for failure to complete the form in a timely and accurate manner.

Table 2. Hypothetical Alaska Crewmember Activity Form

Alaska Crewmember Activity Form

Crew Member Information

Name:	ADF&G Crew License Number: Or CFEC Permit ID:
City, State and Zipcode:	

Activity Information

Please fill complete a row for fishery and vessel on which you fished on during the past **reporting period**. If you fished on more than on vessel in a particular fishery, complete a separate row for each vessel.

Fishery (see back)	ADF&G Vessel #	Permit Holder ID (if known)	Month	Number of Trips	Average Time at Sea

Note: The back of this form would contain a list of the Alaska fisheries for which permits are issued.

Option 2.3 Require all active permit holders to submit a completed "Alaska Crewmember Activity Form" at the end of each fishing year for each crew member they employed during the year: This option is very similar to Option 2.2 except that permit holders would be required report the activities of all of their crew members. The reports would be due by January 15 of the following year. In this option crew members would not be required to report activities.

Option 2.4 Require all active permit holders to submit a completed Alaska Crewmember Activity Form for all crew members they engaged each time a landing is made: The reports could be submitted by fax or email directly to the appropriate management agency by fax or email, or they could be provided to processors or tender vessels with each delivery.

Option 2.5 Require Permit holders to submit a completed Alaska Crewmember Activity Form whenever registering for a fishery or whenever undergoing a tank inspection. Registration is required in the Bristol Bay drift and set gillnet fisheries, and in several groundfish and herring fisheries and tank inspections and/or registration is required in most crab fisheries. In this option the Alaska Crewmember Activity Form would be completed prior to actually engaging in the fishing activity.

Option 2.6 Require observers to complete an Alaska Crewmember Activity Form regarding crew members on any vessel observed in the federal or state fishery observer programs: Observers are required in the federal groundfish fisheries, in the Bering Sea and Aleutian Island crab fisheries and in the scallop fishery. In the groundfish fisheries all catcher processors and vessels greater than 125′ length overall (LOA) are required to carry observers 100 percent of the time. Vessels between 60′ and 125′ LOA are required to have 30 percent observer coverage. Observer coverage requirements in the crab and scallop fisher are slightly different than observer requirements in the groundfish fisheries.

Option 2.7 Augment the logbook reporting requirements in all fisheries that require logbooks to include completion of an Alaska Crewmember Activity Form for each week the vessel is active: In this option, the logbook forms would be augmented with Alaska Crewmember Activity Form. All vessel operators would be required to report the activities of harvesting crew with the same frequency that logbook data are reported.

Option 2.8 Create an electronic version of the Alaska Crewmember Activity Form that would be reported on all vessels and processors using the Interagency Electronic Reporting System: For those fisheries that utilize the IERS system (see Subsection 4.2.2), an electronic version of the Alaska Crewmember Activity Form for all crew members would be submitted along with each landing record/fish-ticket.

Option 2.9 Change the current fish-ticket form to accommodate information reported in the Alaska Crewmember Activity Form. Any processor that issues a fish-ticket would be required to obtain the crew member data from the permit holder and to report the information on the fish-ticket.

6 Workgroup Goals and Objectives

The Southwest Alaska Municipal Conference (SWAMC) is sponsoring the Seafood Harvesting Labor Data Project to help address the issues raised above. Part of this ongoing effort is conducting this work group. The primary objective of the work group session is to gather information and ideas from a wide-ranging group of individuals and organizations. Currently, the work group expects participation from the Alaska Board of Fish, the Alaska Department of Commerce, Community, and Economic Development, the Alaska Department of Fish and Game, the Alaska Department of Labor, the City of Kodiak, the City of Sand Point, the City of Unalaska, the Commercial Fisheries Entry Commission, the Kodiak Area Chamber of Commerce, the Lake and Peninsula Borough, NOAA Fisheries, the North Pacific Fishery Management Council, the University of Alaska's Institute for Social and Economic Research, and the University of Alaska Fairbanks. Jon Isaacs is coordinating the work group session with support from Gunnar Knapp (UAA/ISER), along with Marcus Hartley and Jonathan King from Northern Economics. Northern Economics is the prime contractor responsible for the project as a whole.

The broad goals for the work group session are:

- Further explore the issues associated with seafood harvesting labor data;
- Collect information on current data collection and past estimation efforts;
- Define unfulfilled organizational needs for seafood harvesting labor data;
- Suggest new data collection methods or systems that would eliminate the unfulfilled needs;
- Evaluate potential systems from multiple perspectives and identify the positive and negative attributes of each system as well as the potential hurdles to implementing each system.

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Appendix C– Confidentiality Issues

The issue of confidentiality was raised as a concern at the work group on improving seafood harvesting employment data—of particular concern were alternatives in which crewmember ID's would be linked directly to particular landings, either through a modification of the current fish ticket system, or integrated as part of the soon to be implemented eLandings system.

Confidentiality is a multifaceted issue and the discussion that follows represents the perspective of the authors of this report. The ideas and opinions described below do not necessarily reflect the opinions of the state or the federal governments.

General Protections under State and Federal Confidentiality Rules

Northern Economics assumes that any data submitted under an enhanced seafood employment data collection program would be protected by the same state and federal confidentiality rule that are in place for permit holders, vessel owners, and processors. In particular, the agencies could not release to the public any information that would reveal critical business information about individuals or firms.

Based on these restrictions, agencies cannot release information about the activities of individuals or firms, unless they are aggregated. In general, the State of Alaska requires that data be aggregated such that no fewer than four firms or individuals are represented in any given number. The minimum aggregation level is specified based on the premise that with four or more included, it would be nearly impossible to infer specific information about the activities of any one of the four involved, even if the specific information about one of the four were already known.

Under any of the options under discussion it is assumed that this basic level of protection would be provided crewmembers whose data are reported.

It should be noted in this discussion that the protection of confidentiality are only provided for data showing business activities, but that information provided in the license or permit information (with a few exceptions such as social security numbers) are considered "critical business information" and are generally available to the public. Thus for example it is possible to determine through publicly available information, the specific fishing permits or fishing vessels that any individual holds, along with the address of the individual and other demographic information.

The Right to Access Data

The issue of confidentiality also raises the important issue of who has the right to access data that has already been submitted. In general, the state (and NMFS) assumes that the actual submitters of the information have the right to access the information they submitted. In the past the state has ruled that the both the permit holder identified on the fish ticket as well as the processor identified on the fish ticket have the "access rights" to the data. Of particular interest is the fact that this ruling does not grant a specific right of access to the owner of the harvesting vessel from which the landing was made, even though the vessel identification is listed on the fish ticket.

Based on this ruling, the state did not provide fish ticket data to vessel owners during the sablefish and halibut IFQ application process, unless the vessel owner was also the permit holder of record, even though the IFQs were to be allocated to the vessel owners based on fish ticket landings. In a case, where the vessel owner was not the permit holder, the vessel had to acquire a signed waiver from the permit holder in order to access the information stored by the management agency.

Given this precedent it seems evident that in the event a crew-member identifier was attached to a fish ticket, the crewmember (like vessel owners) would not have access to the business information

included in the fish ticket data (landings amounts, revenue, etc.), because in fact the permit holder and the processor would still be only submitters of the data. It should be noted again that the preceding represents the thinking of Northern Economics and this view is not necessarily the opinion of Attorney General of the State of Alaska.

HB 332

<TARGET><BILL>HB 332</BILL><SUBJECT>HB 332</SUBJECT><COMM>HFSH27</COMM></TARGET>

CS FOR HOUSE BILL NO. 332(FSH)

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-SEVENTH LEGISLATURE - SECOND SESSION

BY THE HOUSE SPECIAL COMMITTEE ON FISHERIES

Offered:
Referred:

Sponsor(s): REPRESENTATIVES HERRON, Foster

A BILL

FOR AN ACT ENTITLED

"An Act establishing the Alaska Chinook research and restoration endowment fund and relating to grants from the fund."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

*** Section 1.** AS 37.14 is amended by adding new sections to read:

Article 7A. Alaska Chinook Salmon Research and Restoration Endowment Fund.

Sec. 37.14.650. Fund established. (a) The Alaska Chinook salmon research and restoration endowment fund is established as a separate endowment trust fund of the state consisting of

(1) appropriations to the fund;

(2) donations to the fund; and

(3) income earned on investments of fund assets appropriated by the legislature to the fund.

(b) The commissioner of revenue shall manage the fund as an endowment, with the goal that the purchasing power of the fund will not diminish over time

without regard to additional contributions that may be made to the fund. The commissioner shall invest the assets of the fund in a manner likely to yield at least a five percent real rate of return over time. The commissioner may comingle the assets of the fund with other public funds for purposes of investment.

(c) In carrying out the investment duties for the fund, the commissioner of revenue has the powers and duties set out in AS 37.10.071. The commissioner shall

(1) provide annual reports to the board on the condition and investment performance of the fund;

(2) maintain records for all donations to the fund; the records must reflect, for each donation, the amount of the donation, the date of the donation, and the donor's intent, if any, with respect to how the donation is to be used; and

(3) monitor use of money by the board.

(d) Nothing in this section creates a dedicated fund.

Sec. 37.14.655. Grant account established. The Alaska Chinook salmon research and restoration grant account is established as an account in the general fund.

Sec. 37.14.660. Appropriations to the grant account. (a) As soon as practicable after July 1 of each year, the commissioner of revenue shall identify as available for appropriation to the Alaska Chinook salmon research and restoration grant account, from which the board may award grants, and for other allowed expenses, the greater of

(1) five percent of the average of the market values of the fund on June 30 for the immediately preceding three fiscal years;

(2) one-half of the earnings of the fund as averaged annually over the immediately preceding three fiscal years; and

(3) if the principal of the fund is valued at over $50,000,000 based on the market value of the fund on June 30 for the immediately preceding fiscal year, the total earnings of the fund for that fiscal year.

(b) The legislature may appropriate funds to the grant account

(1) from

(A) the fund in the amount calculated under (a)(1) of this section; or

(B) the earnings of the fund under (a)(2) or (3) of this section; and

(2) from any other source.

Sec. 37.14.665. Use of the grant account. (a) Appropriations to the grant account established by AS 37.14.655 may be used for

(1) grants for research and restoration projects for Chinook salmon stocks located in the state, including block grants to Alaska organizations identifying and administering research and restoration projects for Chinook salmon stocks, if the project is consistent with a research and restoration plan adopted by the organization and the plan has been approved by the Department of Fish and Game;

(2) reimbursement of the Department of Revenue for the costs of establishing and managing the fund;

(3) reimbursement of the Department of Commerce, Community, and Economic Development for the costs of establishing, maintaining, and administering the board and the grant program;

(4) matching funds for private and federal grants; and

(5) solicitation of contributions for purposes consistent with establishment of the fund.

(b) The board may expend private donations for Chinook salmon research and restorations projects and other uses consistent with the purposes of the fund and in conformity with the donor's restrictions.

Sec. 37.14.670. Board established. The Alaska Chinook Salmon Research and Restoration Endowment Fund Board is established in the Department of Commerce, Community, and Economic Development.

Sec. 37.14.675. Board members. The board consists of the following members appointed by the governor:

(1) the commissioner of fish and game or the commissioner's designee; and

(2) six public members, one residing in each of the following regions who is engaged in subsistence, personal, commercial, or sport use of Chinook salmon stocks in the region:

(A) Southeast Alaska, consisting of all land and water between Palm Point near Katalla and Dixon Entrance that are Gulf of Alaska or mainland drainages; the Guyot Hills; islands in Stephens Passage and Lynn Canal; Coronation Island, Kuiu Island, Kupreanof Island, Mitkof Island, Zarembo Island, Kashevarof Island, Woronkofski Island, Etolin Island, Wrangell Island, Deer Island, Admiralty Island, Baranof Island, Chichagof Island, Yakobi Island, Inian Island, Lemesurier Island, Pleasant Island, Kanak Island, Wingham Island, and Kayak Island; and adjacent marine water and land within three miles of the coastline;

(B) Southcentral Alaska, consisting of all land and water in those drainages south and east of the Alaska Range that drain into the Gulf of Alaska, Cook Inlet, and Prince William Sound between Palm Point near Katalla and Cook Inlet; the drainage between Redoubt Creek and the northern boundary of Katmai National Preserve that flows into Shelikof Strait; the Chitina drainage east to the Canadian border; the drainages into the Delta River upstream from Falls Creek and Black Rapids Glacier; and adjacent marine water and land within three miles of the coastline;

(C) Southwest Alaska, consisting of all land and water between Kennedy Entrance and Cape Newenham that drain into Bristol Bay and the Bering Sea; the Alaska Peninsula; Hagemeister Island, Walrus Island, Kodiak Island, Barren Island, Pribilof Island, Unimak Island, and Aleutian Islands; and adjacent marine water and land within three miles of the coastline;

(D) Western Alaska, consisting of all land and water between Cape Newenham and the Pastolik River near Kotlik that drain into the Bering Sea from the Yukon River downstream from a straight line drawn between Lower Kalskag and Paimiut; the George River drainage; the Kuskokwim River drainage downstream from the George River drainage; the Hoholitna River drainage; and adjacent marine water and land within three miles of the coastline;

(E) Arctic Alaska, consisting of all land and water between the Pastolik River near Kotlik and Harrison Bay west of the Ilkillik River drainage

that drain into the Arctic Ocean, the Chukchi Sea, Kotzebue Sound, or Norton Sound; Saint Lawrence Island and adjacent islands; and the adjacent marine water and land within three miles of the coastline;

(F) Interior Alaska, consisting of all land and water of the Kuskokwim River drainage upstream from the George River drainage; all drainages into the east bank of the Robertson River; White River drainage to the Canadian border; Tozitna River drainage; Yukon River drainage upstream from the Tozitna River drainage; Hamlin Creek drainage; all drainages into the south bank of the Yukon River upstream from and including the Charley River drainage; the Ladue River drainage; Fortymile River drainage; Tanana River drainage north of the Alaska Range; and the Koyukuk River drainage.

Sec. 37.14.680. Duties of the board. (a) The Alaska Chinook Salmon Research and Restoration Endowment Fund Board shall administer the grant program.

(b) The board shall

(1) within 90 days after the appointment of the seventh board member, adopt bylaws governing the board's operation and identify an organization incorporated in Alaska to support the board in performing its duties;

(2) monitor approved projects for compliance with specific grant conditions;

(3) keep electronic recordings of each meeting of the board to be made available on request; and

(4) adopt regulations creating a process for soliciting, awarding, and monitoring research and restoration grants and ensuring peer review for grant projects; the board shall consider the process and structure of the North Pacific Research Board in adopting its regulations.

(c) On February 1 of each year following the calendar year grants are first awarded, the board shall prepare and submit a report to the governor and make the report available to the legislature. The report must include, for the last calendar year,

(1) the number of applicants and the number and type of grants awarded;

(2) the dollar amount of grants awarded;

(3) the research and restoration projects funded and the results of those projects;

(4) the expense to administer the fund, the grants, and the board; and

(5) private contributions, if any, to the fund and how those contributions were used.

Sec. 37.14.685. Review of grants. (a) When reviewing grant applications, the board shall give weight to the following factors:

(1) whether the Chinook salmon stocks targeted in the grant application provide a significant commercial, subsistence, sport, or personal use fishery for Alaska residents;

(2) the importance of the Chinook salmon stocks targeted in the grant application and the fisheries those stocks support, based on the dependence of Alaska residents on the stocks for nutritional, economic, social, and cultural well-being;

(3) whether the applicant has experience in administering research or restoration projects for Chinook salmon;

(4) recommendations of state agencies or organizations involved in Chinook salmon management in the state.

(b) The board shall give priority to grant applications for research or restoration projects targeting Chinook salmon stocks that, within the preceding 10 years,

(1) were listed by the Department of Fish and Game as stocks of concern;

(2) were the subject of a state or federal fisheries disaster declaration;

(3) were closed or significantly restricted for commercial, sport, or personal use, or restricted for subsistence uses; or

(4) declined significantly from historic yield levels.

Sec. 37.14.695. Definitions. In AS 37.14.650 - 37.14.695,

(1) "board" means the Alaska Chinook Salmon Research and Restoration Endowment Fund Board established under AS 37.14.670;

(2) "Chinook salmon" means Alaska king salmon of the genus Oncorhynchus, species tshawytscha;

(3) "fund" means the Alaska Chinook salmon research and restoration endowment fund established under AS 37.14.650;

(4) "grant account" means the Alaska Chinook salmon research and restoration grant account established under AS 37.14.655.

ALASKA STATE LEGISLATURE

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REPRESENTATIVE STEVE THOMPSON
DISTRICT 10

FAX COVERSHEET

To: **Leg. Legal**

Fax Number: **465-2029**

From: **Jane Pierson**

Date: **3/1/12** **Number of pages including cover: 1**

Re: Please go final on HB332 version 27-LS1395\M with the following two conceptual amendment

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Tonight the House Fisheries Committee heard and passed from committee HB332 with two conceptual amendments as follows:

1. Page 6 Lines 15 & 19 after "research and" please add /or
2. Page 6 Line 12 delete "number" and insert "dependence"
   Page 6 Line 13 delete "dependent"

Please make these amendments and go final on the bill.

Thank you.

E-Mail: Representative.Steve.Thompson@legis.state.ak.us
Website: www.akrepublicans.org/thompson/

Representative Bob Herron

Rep.Bob.Herron@legis.state.ak.us

State Capitol • Juneau, Alaska 99801-1182
Phone: (907) 465-4942 • Fax: (907) 465-4589

House District 38
Kuskokwim & Johnson Rivers
Kuskokwin Bay & Nelson Island

Akiachak
Akiak
Atmautluak
Bethel
Chefornak
Eek
Goodnews Bay
Kasigluk
Kipnuk
Kongiganak
Kwethluk
Kwigillingok
Lower Kalskag
Mekoryuk
Mertarvik
Napakiak
Napaskiak
Newtok
Nightmute
Nunapitchuk
Oscarville
Platinum
Quinhagak
Toksook Bay
Tuluksak
Tununak
Tuntutuliak
Upper Kalskag

HB 332 – ALASKA CHINOOK SALMON RESEARCH AND RESTORATION ENDOWMENT FUND

SPONSOR STATEMENT FOR WORK DRAFT 1395/M

HB 332 creates an Alaska Chinook salmon research and restoration fund in the Dept. of Revenue. Grants from the fund would be issued to qualifying organizations. A 7-member board, including the Commissioner of Fish & Game and 6 public members from across the state, would administer the grants.

The state fish of Alaska, Chinook salmon, is an important staple food for Native villages of Alaska and is an economically important species for a number of commercial fisheries and a prized sport fishery resource. Nowhere else are Chinook salmon stocks more valued and essential to the basic way of life than in Alaska.

Chinook salmon populations in Alaska have undergone significant shifts in abundance during the past 40 years, yet little is known about the factors influencing these shifts. Eight of the 14 currently listed "stocks of concern" are Chinook salmon stocks, as defined by the Alaska Board of Fisheries in 5AAC 39.222.

Recent declines of salmon abundance have caused severe hardship in some areas and anxiety for the fishery-dependent communities of Alaska. Limited commercial fishing on Chinook salmon has occurred in recent years and earnings have deteriorated sharply. Poor Chinook salmon returns can exacerbate allocative tension and conflict between fishery user groups competing for a fully allocated fishery resource.

Over the past twenty-five years, there has been considerable variability in Yukon Chinook salmon population dynamics. Available harvest data show a thirty-six year period of sustained abundance early on, with significant declines during the past fifteen years.

To understand the trends and causes of variation in abundance of Chinook salmon, information concerning population biology, freshwater ecology, marine ecology, and population dynamics are needed. Knowledge gaps remain across the State of Alaska indicating that a multi-disciplinary research effort is needed to investigate the role of physical habitat, climate-induced environmental variability, and biological response in Chinook salmon populations if we are to meet the needs of Alaskans that depend upon this resource.

This legislation would create a stable, long-term source of funding to support high quality interdisciplinary research such as the recent work of the Arctic-Yukon-Kuskokwim Sustainable Salmon Initiative (AYK SSI). Research results and information from the AYK SSI is being utilized in a wide variety of ways to support sustainable salmon management. From escapement goal analyses to gaining an improved understanding of the dynamics of marine ecosystems, the AYK SSI is helping to provide fisheries managers with better forecasts and improved responses to changing environmental conditions.

The Alaska Chinook Salmon Research and Restoration Endowment Fund stakeholder board would, along with the Alaska Department of Fish and Game, direct research monies to priority areas and topics based on an adopted Chinook Salmon Action Plan. These funds may also be used to leverage additional funding by providing necessary matching funds.

With this legislation, Alaska can increase its understanding of Chinook salmon and hopefully learn how to best target remediation efforts in order to begin restoring this vital resource.

27-LS1395\M
Kirsch
2/23/12

CS FOR HOUSE BILL NO. 332( )

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-SEVENTH LEGISLATURE - SECOND SESSION

BY

Offered:
Referred:

Sponsor(s): REPRESENTATIVES HERRON, Foster

A BILL

FOR AN ACT ENTITLED

"An Act establishing the Alaska Chinook research and restoration endowment fund and relating to grants from the fund."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

*** Section 1.** AS 37.14 is amended by adding new sections to read:

Article 7A. Alaska Chinook Salmon Research and Restoration Endowment Fund.

Sec. 37.14.650. Fund established. (a) The Alaska Chinook salmon research and restoration endowment fund is established as a separate endowment trust fund of the state consisting of

(1) appropriations to the fund;

(2) donations to the fund; and

(3) income earned on investments of fund assets appropriated by the legislature to the fund.

(b) The commissioner of revenue shall manage the fund as an endowment, with the goal that the purchasing power of the fund will not diminish over time

New Text Underlined [DELETED TEXT BRACKETED]

without regard to additional contributions that may be made to the fund. The commissioner shall invest the assets of the fund in a manner likely to yield at least a five percent real rate of return over time. The commissioner may comingle the assets of the fund with other public funds for purposes of investment.

(c) In carrying out the investment duties for the fund, the commissioner of revenue has the powers and duties set out in AS 37.10.071. The commissioner shall

(1) provide annual reports to the board on the condition and investment performance of the fund;

(2) maintain records for all donations to the fund; the records must reflect, for each donation, the amount of the donation, the date of the donation, and the donor's intent, if any, with respect to how the donation is to be used; and

(3) monitor use of money by the board.

(d) Nothing in this section creates a dedicated fund.

Sec. 37.14.655. Grant account established. The Alaska Chinook salmon research and restoration grant account is established as an account in the general fund.

Sec. 37.14.660. Appropriations to the grant account. (a) As soon as practicable after July 1 of each year, the commissioner of revenue shall identify as available for appropriation to the Alaska Chinook salmon research and restoration grant account, from which the board may award grants, and for other allowed expenses, the greater of

(1) five percent of the average of the market values of the fund on June 30 for the immediately preceding three fiscal years;

(2) one-half of the earnings of the fund as averaged annually over the immediately preceding three fiscal years; and

(3) if the principal of the fund is valued at over $50,000,000 based on the market value of the fund on June 30 for the immediately preceding fiscal year, the total earnings of the fund for that fiscal year.

(b) The legislature may appropriate funds to the grant account

(1) from

(A) the fund in the amount calculated under (a)(1) of this section; or

(B) the earnings of the fund under (a)(2) or (3) of this section; and

(2) from any other source.

Sec. 37.14.665. Use of the grant account. (a) Appropriations to the grant account established by AS 37.14.655 may be used for

(1) grants for research and restoration projects for Chinook salmon stocks located in the state, including block grants to Alaska organizations identifying and administering research and restoration projects for Chinook salmon stocks, if the project is consistent with a research and restoration plan adopted by the organization and the plan has been approved by the Department of Fish and Game;

(2) reimbursement of the Department of Revenue for the costs of establishing and managing the fund;

(3) reimbursement of the Department of Commerce, Community, and Economic Development for the costs of establishing, maintaining, and administering the board and the grant program;

(4) matching funds for private and federal grants; and

(5) solicitation of contributions for purposes consistent with establishment of the fund.

(b) The board may expend private donations for Chinook salmon research and restorations projects and other uses consistent with the purposes of the fund and in conformity with the donor's restrictions.

Sec. 37.14.670. Board established. The Alaska Chinook Salmon Research and Restoration Endowment Fund Board is established in the Department of Commerce, Community, and Economic Development.

Sec. 37.14.675. Board members. The board consists of the following members appointed by the governor:

(1) the commissioner of fish and game or the commissioner's designee; and

(2) six public members, one residing in each of the following regions who is engaged in subsistence, personal, commercial, or sport use of Chinook salmon stocks in the region:

(A) Southeast Alaska, consisting of all land and water between Palm Point near Katalla and Dixon Entrance that are Gulf of Alaska or mainland drainages; the Guyot Hills; islands in Stephens Passage and Lynn Canal; Coronation Island, Kuiu Island, Kupreanof Island, Mitkof Island, Zarembo Island, Kashevarof Island, Woronkofski Island, Etolin Island, Wrangell Island, Deer Island, Admiralty Island, Baranof Island, Chichagof Island, Yakobi Island, Inian Island, Lemesurier Island, Pleasant Island, Kanak Island, Wingham Island, and Kayak Island; and adjacent marine water and land within three miles of the coastline;

(B) Southcentral Alaska, consisting of all land and water in those drainages south and east of the Alaska Range that drain into the Gulf of Alaska, Cook Inlet, and Prince William Sound between Palm Point near Katalla and Cook Inlet; the drainage between Redoubt Creek and the northern boundary of Katmai National Preserve that flows into Shelikof Strait; the Chitina drainage east to the Canadian border; the drainages into the Delta River upstream from Falls Creek and Black Rapids Glacier; and adjacent marine water and land within three miles of the coastline;

(C) Southwest Alaska, consisting of all land and water between Kennedy Entrance and Cape Newenham that drain into Bristol Bay and the Bering Sea; the Alaska Peninsula; Hagemeister Island, Walrus Island, Kodiak Island, Barren Island, Pribilof Island, Unimak Island, and Aleutian Islands; and adjacent marine water and land within three miles of the coastline;

(D) Western Alaska, consisting of all land and water between Cape Newenham and the Pastolik River near Kotlik that drain into the Bering Sea from the Yukon River downstream from a straight line drawn between Lower Kalskag and Paimiut; the George River drainage; the Kuskokwim River drainage downstream from the George River drainage; the Hoholitna River drainage; and adjacent marine water and land within three miles of the coastline;

(E) Arctic Alaska, consisting of all land and water between the Pastolik River near Kotlik and Harrison Bay west of the Ilkillik River drainage

that drain into the Arctic Ocean, the Chukchi Sea, Kotzebue Sound, or Norton Sound; Saint Lawrence Island and adjacent islands; and the adjacent marine water and land within three miles of the coastline;

(F) Interior Alaska, consisting of all land and water of the Kuskokwim River drainage upstream from the George River drainage; all drainages into the east bank of the Robertson River; White River drainage to the Canadian border; Tozitna River drainage; Yukon River drainage upstream from the Tozitna River drainage; Hamlin Creek drainage; all drainages into the south bank of the Yukon River upstream from and including the Charley River drainage; the Ladue River drainage; Fortymile River drainage; Tanana River drainage north of the Alaska Range; and the Koyukuk River drainage.

Sec. 37.14.680. Duties of the board. (a) The Alaska Chinook Salmon Research and Restoration Endowment Fund Board shall administer the grant program.

(b) The board shall

(1) within 90 days after the appointment of the seventh board member, adopt bylaws governing the board's operation and identify an organization incorporated in Alaska to support the board in performing its duties;

(2) monitor approved projects for compliance with specific grant conditions;

(3) keep electronic recordings of each meeting of the board to be made available on request; and

(4) adopt regulations creating a process for soliciting, awarding, and monitoring research and restoration grants and ensuring peer review for grant projects; the board shall consider the process and structure of the North Pacific Research Board in adopting its regulations.

(c) On February 1 of each year following the calendar year grants are first awarded, the board shall prepare and submit a report to the governor and make the report available to the legislature. The report must include, for the last calendar year,

(1) the number of applicants and the number and type of grants awarded;

(2) the dollar amount of grants awarded;

(3) the research and restoration projects funded and the results of those projects;

(4) the expense to administer the fund, the grants, and the board; and

(5) private contributions, if any, to the fund and how those contributions were used.

Sec. 37.14.685. Review of grants. (a) When reviewing grant applications, the board shall give weight to the following factors:

(1) whether the Chinook salmon stocks targeted in the grant application provide a significant commercial, subsistence, sport, or personal use fishery for Alaska residents;

(2) the importance of the Chinook salmon stocks targeted in the grant application and the fisheries those stocks support, based on the number of Alaska residents dependent on the stocks for nutritional, economic, social, and cultural well-being;

(3) whether the applicant has experience in administering research [and] /OR restoration projects for Chinook salmon;

(4) recommendations of state agencies or organizations involved in Chinook salmon management in the state.

(b) The board shall give priority to grant applications for research [and] /OR restoration projects targeting Chinook salmon stocks that, within the preceding 10 years,

(1) were listed by the Department of Fish and Game as stocks of concern;

(2) were the subject of a state or federal fisheries disaster declaration;

(3) were closed or significantly restricted for commercial, sport, or personal use, or restricted for subsistence uses; or

(4) declined significantly from historic yield levels.

Sec. 37.14.695. Definitions. In AS 37.14.650 - 37.14.695,

(1) "board" means the Alaska Chinook Salmon Research and Restoration Endowment Fund Board established under AS 37.14.670;

(2) "Chinook salmon" means Alaska king salmon of the genus

Oncorhynchus, species tshawytscha;

(3) "fund" means the Alaska Chinook salmon research and restoration endowment fund established under AS 37.14.650;

(4) "grant account" means the Alaska Chinook salmon research and restoration grant account established under AS 37.14.655.

Changes from HB 332 (1395\A) to Work Draft 1395/M

P.3, line 29: delete "from" and insert "residing in"

P.3 line 30: inserted after "regions": "who is engaged in subsistence, personal, commercial or sport use of Chinook salmon stocks in the region"

P. 5, line 16 inserted after "operation": "and identify an organization incorporated in Alaska to support the board in performing its duties"

P. 5, line 22: deleted "the award of grants similar to the structure and process employed by the Arctic-Yukon-Kuskokwim Sustainable Salmon Initiative for"

P.5, line 24: inserted: "the board shall consider the process and structure of the North Pacific Research Board in adopting its regulations"

P. 6, line 9: inserted after "subsistence": "sport"

Representative Bob Herron

Rep.Bob.Herron@legis.state.ak.us

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House District 38
Kuskokwim & Johnson Rivers
Kuskokwin Bay & Nelson Island

Akiachak
Akiak
Atmautluak
Bethel
Chefornak
Eek
Goodnews Bay
Kasigluk
Kipnuk
Kongiganak
Kwethluk
Kwigillingok
Lower Kalskag
Mekoryuk
Mertarvik
Napakiak
Napaskiak
Newtok
Nightmute
Nunapitchuk
Oscarville
Platinum
Quinhagak
Toksook Bay
Tuluksak
Tununak
Tuntutuliak
Upper Kalskag

HB 332 – ALASKA CHINOOK SALMON RESEARCH AND RESTORATION ENDOWMENT FUND

SECTIONAL ANALYSIS to Work Draft 1395/M

Section 37.14.650 Establishes the Alaska Chinook salmon research and restoration fund (hereafter: "the Fund") in the Dept. of Revenue. The Fund includes appropriations and donations to the Fund, and income earned on investments of Fund assets. Commissioner of Revenue manages the Fund sustainably, with a goal of 5% real rate of return. Nothing in this section creates a dedicated fund.

Section 37.14.655 Establishes the Alaska Chinook salmon research and restoration grant account (hereafter: "the Grant Account") in the general fund.

Section 37.14.660 After July 1 each year, the Commissioner of Revenue identifies as available for appropriation to the Grant Account established under the previous section the greater of: 5% of the Fund averaged over the 3 preceding years; ½ the Fund's earnings averaged over the 3 preceding years; or, if the Fund is valued at over $50,000,000, the total earnings of the Fund for that year. The legislature may then appropriate to the Grant Account from the Fund an amount equal to any of the 3 preceding calculations, or from any other source.

Section 37.14.665 Appropriations to the Grant Account may be used for: grants for research and restoration projects for Alaska Chinook salmon stocks; reimbursement to the Dept. of Revenue for the costs of establishing or managing the Fund; reimbursement to DCCED for the costs of establishing and administering the Board and the grant program; matching funds for private and federal grants; and solicitation of contributions for purposes consistent with establishment of the Fund. The Board may also expend private donations for uses consistent with purposes of the Fund.

Section 37.14.670 Establishes the Alaska Chinook Salmon Research and Restoration Endowment Fund Board (before and hereafter: "the Board") in DCCED.

Section 37.14.675 Board members appointed by the Governor include: the Commissioner of Fish & Game; six public members, one each residing in Alaska's Southeast, Southcentral, Southwest, Western, Arctic, and Interior regions, who are engaged in subsistence, personal, commercial, or sport use of Chinook salmon.

Section 37.14.680 The Board shall administer the Grant Program. Within 90 days after the appointment of the last Board member, the Board shall adopt bylaws governing its operation and identify an organization incorporated in Alaska to support the Board in performing its duties. The Board shall also: monitor projects for compliance; keep electronic recordings of each meeting; and adopt regulations creating a process for soliciting, awarding, and monitoring grants (the Board shall consider the North Pacific Research Board while adopting these regulations).

On February 1 of each year, the Board shall prepare a report for the Governor and Legislature that includes: the number of applicants and types of grants awarded; dollar amount of grants awarded; projects funded and results of those projects; expense to administer the Fund, the grants, and the Board; and how any private contributions were expended.

Section 37.14.685 When reviewing grant applications, the Board shall consider: whether the Chinook salmon targeted in the grant are significant to Alaskans; whether the applicant has appropriate experience; and the recommendations of state agencies or organizations involved in Chinook salmon management.

The Board shall give priority to grants that target Chinook salmon stocks that were, within the previous ten years: listed by Dept. of Fish & Game as stocks of concern; subject to a state or federal fisheries disaster declaration; closed or significantly restricted; or declined significantly from historic yields.

Section 37.14.695 Lists four definitions that are already apparent in the foregoing.

FISCAL NOTE

STATE OF ALASKA
2012 LEGISLATIVE SESSION

Bill Version **HB332**
Fiscal Note Number
() Publish Date

Identifier (file name) HB332-DOA-DOF-02-22-12
Title Chinook Research and Restoration Endowment
Sponsor Representative Herron
Requester House Fisheries

Dept Affected Administration
Appropriation Centralized Administrative Services
Allocation Finance
OMB Component Number 59

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	FY13 Appropriation Requested	Included in Governor's FY13 Request	Out-Year Cost Estimates				
OPERATING EXPENDITURES	**FY13**	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**
Personal Services							
Travel							
Services							
Commodities							
Capital Outlay							
Grants, Benefits							
Miscellaneous							
TOTAL OPERATING	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

FUND SOURCE		(Thousands of Dollars)						
1002	Federal Receipts							
1003	GF Match							
1004	GF							
1005	GF/Prgm (DGF)							
1037	GF/MH (UGF)							
1178	temp code (UGF)							
TOTAL		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

POSITIONS							
Full-time							
Part-time							
Temporary							

CHANGE IN REVENUES							

Estimated SUPPLEMENTAL (FY12) operating costs _____ *(separate supplemental appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Estimated CAPITAL (FY13) costs _____ *(separate capital appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Why this fiscal note differs from previous version (if initial version, please note as such)

Not applicable, initial version

Prepared by Scot Arehart, Director — Phone 465-3435
Division Division of Finance — Date/Time 2/22/2012 5:00pm
Approved by John Cramer, Deputy Commissioner — Date 2/23/2012
Department of Administration

(Revised 1/17/2012 OMB)

FISCAL NOTE

STATE OF ALASKA
2012 LEGISLATIVE SESSION

BILL NO. HB332

Analysis

Establishing funds and accounts created by legislation such as this is performed in the normal course of business by the Division of Finance. Therefore a zero fiscal note is submitted.

FISCAL NOTE

STATE OF ALASKA
2012 LEGISLATIVE SESSION

Bill Version **HB 332**
Fiscal Note Number
() Publish Date

Identifier (file name) HB332-DCCED-DCRA-02-24-12
Title Chinook Research & Restoration Endowment
Sponsor Representative Herron
Requester House Fisheries

Dept. Affected DCCED
Appropriation Community and Regional Affairs
Allocation Community and Regional Affairs
OMB Component Number 2879

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	FY13 Appropriation Requested	Included in Governor's FY13 Request	Out-Year Cost Estimates				
OPERATING EXPENDITURES	**FY13**	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**
Personal Services	0.0		0.0	0.0	0.0	0.0	0.0
Travel	26.5		26.5	26.5	26.5	26.5	26.5
Services	1.5		1.5	1.5	1.5	1.5	1.5
Commodities	1.5		0.5	0.5	0.5	0.5	0.5
Capital Outlay							
Grants, Benefits							
Miscellaneous							
TOTAL OPERATING	**29.5**	**0.0**	**28.5**	**28.5**	**28.5**	**28.5**	**28.5**

FUND SOURCE		(Thousands of Dollars)						
1002	Federal Receipts							
1003	GF Match							
1004	GF							
1005	GF/Prgm (DGF)							
1037	GF/MH (UGF)							
1178	temp code (UGF)	29.5		28.5	28.5	28.5	28.5	28.5
	TOTAL	**29.5**	**0.0**	**28.5**	**28.5**	**28.5**	**28.5**	**28.5**

POSITIONS							
Full-time							
Part-time							
Temporary	**0**		0	0	0	0	0

CHANGE IN REVENUES							

Estimated SUPPLEMENTAL (FY12) operating costs 0.0 *(separate supplemental appropriation required,*
(discuss reasons and fund source(s) in analysis section)

Estimated CAPITAL (FY13) costs 0.0 *(separate capital appropriation required,*
(discuss reasons and fund source(s) in analysis section)

Why this fiscal note differs from previous version (if initial version, please note as such)

Initial Version

Prepared by Scott Ruby
Division Community and Regional Affairs
Approved by JoEllen Hanrahan, Director Administrative Services
Commerce, Community and Economic Development

Phone (907) 269-4569
Date/Time 2/23/2012 1:30pm
Date 2/24/2012

(Revised 1/17/2012 OMB)

FISCAL NOTE

STATE OF ALASKA
2012 LEGISLATIVE SESSION

BILL NO. HB 332

Analysis

This bill establishes an endowment fund with the purpose of funding research and restoration projects for Chinook salmon stocks located in the state. Earnings from the fund may be used for block grants to Alaska organizations for projects, as matching funds for private and federal grants, and to reimburse the Departments of Revenue and Commerce for costs associated with program administration.

The bill also establishes a seven member board consisting of the Commissioner of Fish and Game and six public members from various regions of the state.

The Department of Commerce, Community, and Economic Development is responsible for administration of the board and disbursal of funds through grants or reimbursements. The Department will be required to adopt regulations enacting a block grant program outlined in the bill.

Travel includes costs for seven board members for two face to face meetings per year at $14.0, department staff board support and grant monitoring visits at $12.5 per year

Services costs inlcudes board teleconferences at $1.5.

Commodities costs include preparing and publishing the public notice for the regulations one-time ($1.0), and preparing applications solicitations and reports on a yearly basis ($0.5).

FISCAL NOTE

STATE OF ALASKA
2012 LEGISLATIVE SESSION

Bill Version: **HB332**
Fiscal Note Number:
() Publish Date:

Identifier (file name): HB332-DOR-TRS-2-28-12
Dept. Affected: Revenue
Title: Alaska Chinook research & restoration endowment fund
Appropriation: Treasury and Taxation
Allocation: Treasury
Sponsor: Rep Herron, Foster
Requester: (H) FSH
OMB Component Number: 121

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	FY13 Appropriation Requested	Included in Governor's FY13 Request	Out-Year Cost Estimates				
OPERATING EXPENDITURES	**FY13**	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**
Personal Services							
Travel							
Services	13.0		13.0	13.0	13.0	13.0	13.0
Commodities							
Capital Outlay							
Grants, Benefits							
Miscellaneous							
TOTAL OPERATING	**13.0**	**0.0**	**13.0**	**13.0**	**13.0**	**13.0**	**13.0**

FUND SOURCE		(Thousands of Dollars)						
1002	Federal Receipts							
1003	GF Match							
1004	GF							
1005	GF/Prgm (DGF)							
1037	GF/MH (UGF)							
1178	temp code (UGF)	13.0		13.0	13.0	13.0	13.0	13.0
TOTAL		**13.0**	**0.0**	**13.0**	**13.0**	**13.0**	**13.0**	**13.0**

POSITIONS							
Full-time							
Part-time							
Temporary							

CHANGE IN REVENUES							

Estimated SUPPLEMENTAL (FY12) operating costs _____ *(separate supplemental appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Estimated CAPITAL (FY13) costs _____ *(separate capital appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Why this fiscal note differs from previous version (if initial version, please note as such)

Initial note.

Prepared by: Pam Leary
Phone: 465-2300
Division: Treasury
Date/Time: 2/28/12 12:00 AM
Approved by: Angela Rodell
Deputy Commissioner
Date: 2/28/2012

(Revised 1/17/2012 OMB)

FISCAL NOTE

STATE OF ALASKA
2012 LEGISLATIVE SESSION

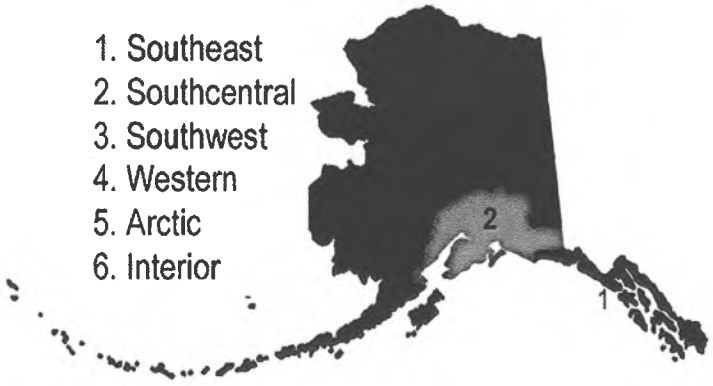
BILL NO. HB332

Analysis

This bill provides for the Chinook reserch and restoration endowment fund to be established as a separate account and managed by the Commissioner of Revenue. This fiscal notes assumes a fund balance of $50 million in order to estimate costs and therefore that total earnings of the fund for the previous fiscal year can be appropriated to the grant account in the general fund, as per Sec 37.14.660 (a) (3). Services expenditures represent the incremental external management fees for managing this fund, based on an asset allocation of 41% fixed income, 27% domestic equity and 32% international equity. Note that this bill establishes that the grant fund , an account fund to be established in the general fund, will pay for the costs of establishing and managing the fund which will include the services expenditures above as well as its share of other Treasury costs as identified through the Treasury cost allocation plan.

Alaska Department of Fish and Game

Advisory Committees by Region



ARCTIC *Map *(473K)*

Arctic
Kotzebue
Lower Kobuk
Noatak/Kivalina
Northern Norton Sound
Northern Seward Peninsula
St Lawrence Island
Southern Norton Sound
Upper Kobuk

INTERIOR *Map *(438K)*
Central
Delta
Eagle
Fairbanks
Grayling, Anvik, Shageluk and Holy Cross (G.A.S.H.)
Koyukuk
Lake Minchumina
McGrath
Middle Nenana River
Middle Yukon River
Minto/Nenana
Ruby
Tanana/Rampart/Manly
Upper Tanana/Forty Mile
Yukon Flats

SOUTHCENTRAL *Map *(347K)*
Anchorage
Central Peninsula
Cooper Landing
Copper Basin
Copper River/Prince Wm. Sd

Denali
Homer
Kenai/Soldotna
Kodiak
Matanuska Valley
Mt. Yenlo
Paxson
Seldovia
Seward
Susitna Valley
Tok Cutoff/Nabesna Road
Tyonek
Valdez
Whittier

SOUTHEAST *Map *(268K)*
Angoon
Craig
East Prince of Wales Island
Edna Bay
Elfin Cove
Hydaburg
Hyder
Icy Straits
Juneau-Douglas
Kake
Ketchikan
Klawock
Klukwan
Pelican
Petersburg
Port Alexander
Saxman
Sitka
Sumner Strait
Tenakee Springs
Upper Lynn Canal
Wrangell
Yakutat

SOUTHWEST *Map *(354K)*
Chignik
False Pass
King Cove
Lake Iliamna
Lower Bristol Bay
Lower Kuskokwim
Naknek/Kvichak
Nelson Lagoon
Nushagak
Sand Point
Togiak
Unalaska/Dutch Harbor

WESTERN *Map *(428K)*
Central Bering Sea
Lower Kuskokwim
Central Kuskokwim
Lower Yukon
Stony-Holitna

Bering Sea Fishermen's Association
1130 W. 6th Avenue, Suite 110
Anchorage, Alaska 99501
(907) 279-6519 or (888) 927-2732
FAX (907) 258-6688

COMPREHENSIVE DEFENSE FOR HOUSE BILL 332

THE NEED FOR A DEDICATED RESEARCH & RESTORATION CHINOOK SALMON ENDOWMENT FUND

By AS 44.09.085, the Chinook salmon is the State fish of Alaska. Chinook salmon is an important staple food for Native villages of Alaska and they are an economically important species for a number of commercial fisheries and a prized sport fishery resource. While Chinook salmon populations in Alaska have undergone significant shifts in abundance during the past 40 years, a number of stocks critically important to subsistence and commercial harvests have sharply declined in the past decade.

In certain regions, such as the Yukon River, Kuskokwim River and Unalakleet River watersheds, Chinook salmon constitute the mainstay of the subsistence diet and are critically important to the subsistence economy and cultural continuity of the more than sixty villages in these regions.

Eight of the 14 currently listed "stocks of concern" are Chinook salmon stocks, as defined by the Alaska Board of Fisheries in 5AAC 39.222. A stock of yield concern is defined as "a concern arising from a chronic inability, despite the use of specific management measures, to maintain expected yields, or harvestable surpluses, above a stock's escapement needs; a yield concern is less severe than a management concern" (5 AAC 39.222(f)(42)).

Table 1. Current stocks of concern

Stock	Species	Concern Level	Year began
Norton Sound subdistrict 1 (Nome)	Chum	Yield	2000
Norton Sound subdistrict 2 (Golovin)	Chum	Yield	2000
Norton Sound subdistrict 3 (Moses Point)	Chum	Yield	2000
Norton Sound subdistrict 4 (Shaktoolik)	***Chinook***	***Yield***	***2004***
Norton Sound subdistrict 5 (Unalakleet)	***Chinook***	***Yield***	***2004***
Yukon River	***Chinook***	***Yield***	***2000***
Kvichak River	sockeye	Yield	2001
Susitna River (Yentna)	Sockeye	Yield	2008
Chuitna River	***Chinook***	***Management***	***2011***
Theodore River	***Chinook***	***Management***	***2011***
Lewis River	***Chinook***	***Management***	***2011***
Willow and Goose Creeks	***Chinook***	***Yield***	***2011***
Alexander Creek	***Chinook***	***Management***	***2011***

McDonald Lake	Sockeye	Management	2009

Recent declines of salmon abundance have caused severe hardship in a number of regions and anxiety for the fishery-dependent communities of Alaska. Limited commercial fishing on Chinook salmon has occurred in recent years and earnings have deteriorated sharply. Poor Chinook salmon returns can exacerbate allocative tension and conflict between fishery user groups competing for a fully allocated fishery resource.

In the Arctic- Yukon-Kuskokwim region, poor runs of Chinook salmon, plus concurrent declines of chum salmon, have led state and federal agencies to declare fishery disasters in 1997, 1998, 2000, 2001, 2002, 2008 and 2009.

Table 2. Fishery disasters in the AYK region

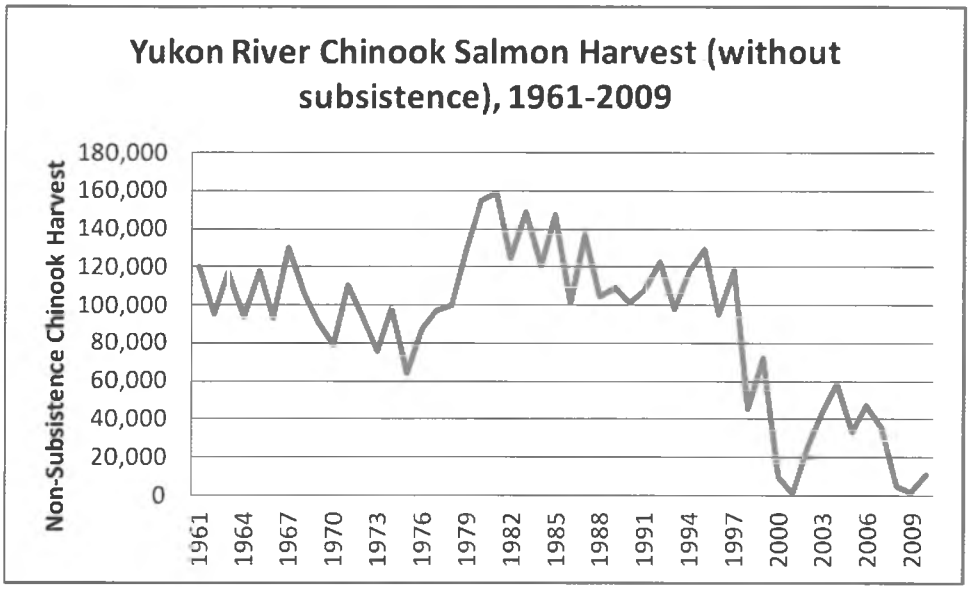
Watershed	Years	Declaration source	Declaration type
Kuskokwim River Watershed	1997 1998 2000 2001 2002	State	Economic Fish Disaster
Norton Sound Watershed	2000 2001 2002	State	Economic Fish Disaster
Yukon River Watershed	1997 1998 2000 2001 2002	State	Economic Fish Disaster
Yukon River Watershed	2008 2009	Federal	Commercial Fishery Failure
Kuskokwim Region	1997	Federal	Commercial Fishery Failure
Yukon, Kuskokwim and Norton Sound	2000	Federal	Fisheries Disaster

YUKON RIVER

Beginning in the late-1990's, the Yukon River Chinook salmon stocks entered a period of, steep decline, which appears to be worsening at this time. This sharp decline is evidenced by the following:

- Escapement goals to Canada, where approximately 50% of the total run spawns, were not met in 2007, 2008, or 2010. (JTC, 2011?)
- Commercial harvests of Chinook salmon has been largely or completely curtailed in four out of the last five years, and the same is expected for 2012. While overall

commercial fishery earnings on the Yukon may be small when compared to other commercial salmon fisheries in the state, the income is quite significant to residents of the region where cash incomes are scarce. Chinook have historically represented approximately 65% of the commercial fishery revenue on the Yukon (1977-2011 average) however in the past 4 years, this has shrink to only 15% of the fishery value. (Bue, et.al., 2011)



- Despite having some of the highest subsistence dependence and lowest incomes in the state, state and federal managers have had to implement numerous subsistence harvest restrictions each year in an effort to reach minimum escapement targets. Due to these poor runs and fishery restrictions, **subsistence harvest of Chinook Salmon for the period 2008 to 2010 declined 22%** compared to the period 1982-1997 (JTC, 2011) and for the years 2008, 2009 and 2010 the subsistence harvest of Chinook salmon on the Yukon River has fallen below the amount necessary for subsistence (ANS) by the Alaska Board of Fisheries (ANS = 45,500-66-704 Chinook salmon, 5 AAC 01.236). The 2011 subsistence harvest estimates are not yet available, however it is highly likely that the harvest once again fell below the amount needed.

- ADFG has documented a decrease in the proportion of large Chinook salmon returning (Hamazaki, 2009) and also decreasing trends in the proportion of returning 6- and 7-year old Chinook salmon (Howard, Hayes and Evenson, 2009).

- Most significantly, the key measure of productivity shows that the Yukon Chinook salmon runs which spawned in the years 2002 – 2004, whose offspring have now returned to the river as adults— have a productivity around **one return per spawner** (see Figure 1, Spaeder and Catalano, 2011)

    - That means that in the **absence of any fishing**, the population is just barely able replace itself, with each spawner producing, on average, one prodigy surviving to return to the spawning grounds. **With harvest, the population is**

below replacement.

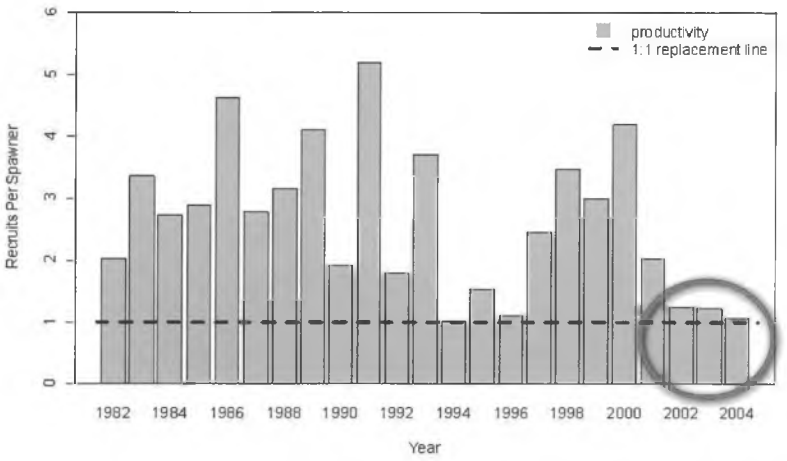


Figure 1. Brood-year productivity (recruits per spawner; bars) for Yukon River Canadian-Origin Chinook salmon, 1982-2004. Productivity was estimated by dividing the sum of returns from a given brood year by the escapement that produced them. Brood year is defined as the year of the escapement that gave rise to the subsequent returns. For example, the 1982 brood year productivity estimate was the sum age 3-7 salmon that returned from 1985 – 1989, respectively, divided by the escapement in 1982. Productivity from the 2004-2010 brood years were not estimable because those cohorts have not yet fully returned to the river. The horizontal dashed line depicts the productivity required for the population to replace itself. Source: Spaeder and Catalano, 2011

In summary, the Yukon River populations which sustained an average combined commercial and subsistence harvest of over 150,000 Chinook salmon from the 1960's to the 1990's, is now no longer able to consistently meet the Amounts Necessary for Subsistence nor have we met escapement and treaty obligations to Canada in 3 out of the last 5 years.

KUSKOKWIM RIVER

The Kuskokwim River hosts the largest subsistence fishery for Chinook salmon in the state (Fall, et. al., 2009). A similar pattern of steep decline has occurred for Kuskokwim River Chinook, as evidenced by the following:

- The 2010 and 2011 Chinook runs are the lowest recorded in 35 years.
- In 2010 and 2011, abundance was not sufficient to meet escapement goals in the region, despite some restrictions to the subsistence fishery.
- The recently completed ADFG Kuskokwim Chinook run reconstruction- funded by the AYK Sustainable Salmon Initiative – documents that the Kuskokwim stocks are in the worst shape than the Yukon Chinook. This key measure of productivity shows that the Kuskokwim River Chinook salmon runs which spawned in the years 2004-2006, whose offspring are just now returning to the river as adults - have productivity well below one return per spawner. That means that in the absence of any fishing, the population is not even replacing itself.

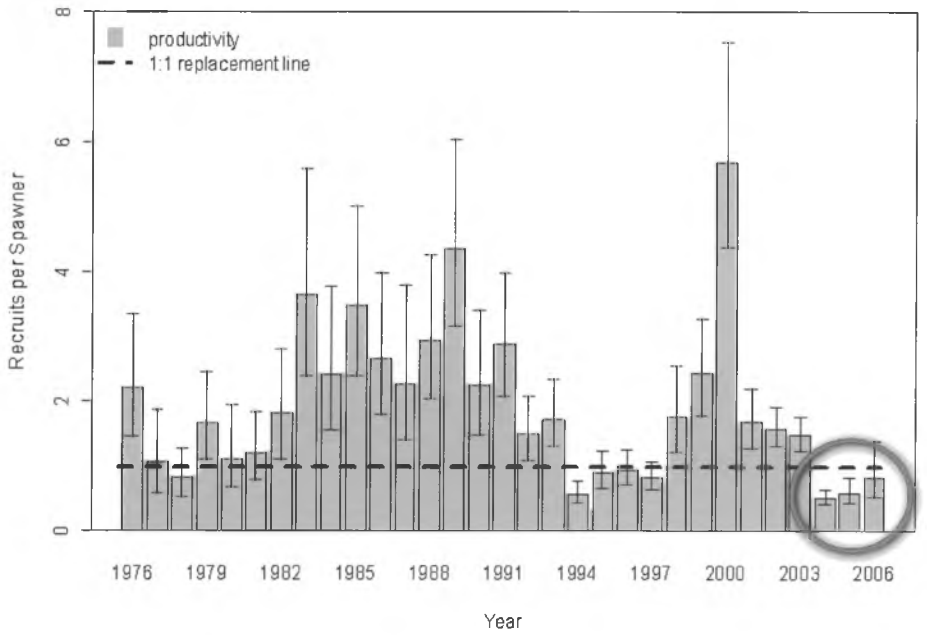


Figure 2. Brood-year productivity (recruits per spawner; bars; 95% CI) for Kuskokwim River Chinook salmon, 1976-2006. Productivity was estimated by dividing the sum of returns from a given brood year by the escapement that produced them. Brood year is defined as the year of the escapement that gave rise to the subsequent returns. *Source:* Spaeder and Catalano, 2011.

UNALAKLEET RIVER

The Unalakleet River produces the largest Chinook salmon run in Norton Sound, and continues to be in a period of sustained decline since 1999. There have been no directed commercial fisheries for Chinook salmon in eastern Norton Sound since 2000. Commercial harvests that averaged 7,118 Chinook salmon in the 1980's and 1990's averaged only 130 fish from 2000-2009 (Kent and Bergstrom, 2009). See figure 3, below.

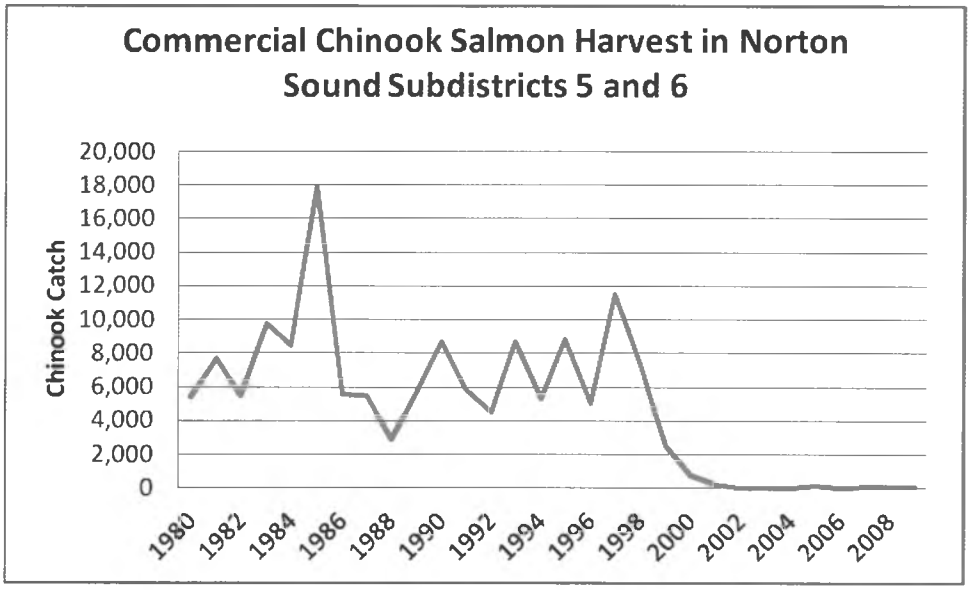


Figure 3. Commercial fishery harvest of Chinook salmon in eastern Norton Sound, fishery

subdistricts 5 (Shaktoolik) and 6 (Unalakleet).

NUSHAGAK RIVER

The Nushagak River system is the fifth largest river in Alaska by volume of water discharged. The Nushagak River hosts the largest sport fishery for Chinook salmon in the United States, with the third-largest Chinook run in the country. In recent years the spawning escapement has reached the lower end of the escapement goal representing a lower than expected return. The commercial harvest of Chinook salmon has been 67% below the anticipated harvest, estimated based on an average exploitation rate of 35% in the Nushagak District commercial salmon fishery from 2003-2007. The commercial harvest in 2008 was one of the smallest harvests of Chinook salmon in the Nushagak District since 1966; only Chinook salmon harvests in 1999 (10,893), 2000 (12,055) and 2001 (11,568) have been smaller. (NMFS, 2009) The Nushagak River Chinook salmon run appears to have declined to a low point in 2010, where harvests were below average in all districts. (ADFG 2010)

ALEXANDER CREEK, Upper Cook Inlet

Alexander Creek once hosted a thriving sport fishery for Chinook salmon on the lower westside of the Susitna River, but recent returns to this river have fallen to perilously low levels. It is believed that northern pike were illegally introduced to a lake in the Susitna River watershed and have spread throughout the drainage, including into Alexander Creek and are the likely cause for the Chinook salmon's decline (ADFG, 2011). The sport fishery for Chinook salmon was closed by regulation in 2008 (see figure 4). The decline and closure of the sport fishery on Alexander Creek has likely resulted in increased fishing pressure on other area rivers that have Chinook salmon runs like Lake Creek, Deshka River and the Little Susitna River.

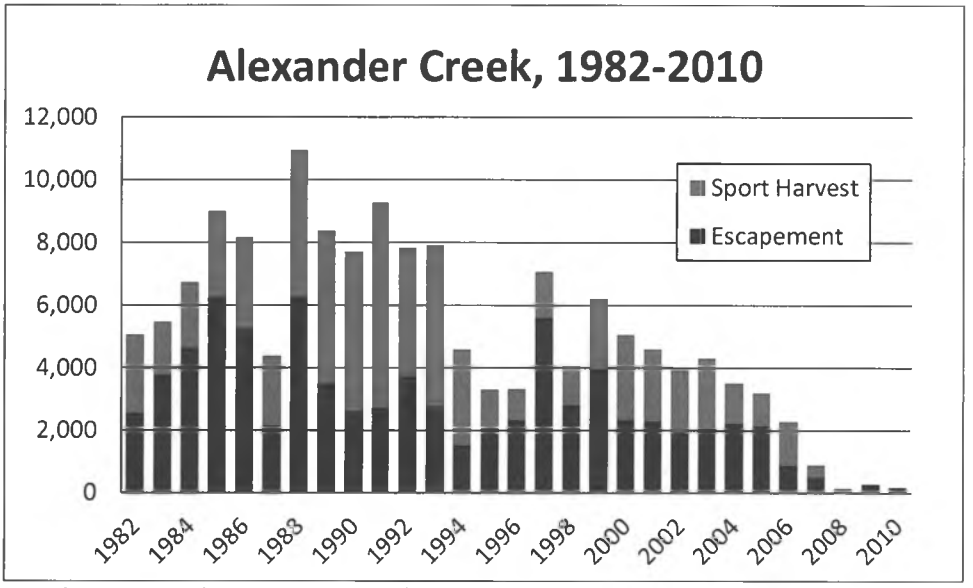


Figure 4. Sport harvest and escapement, Alexander Creek.

Discussion of fishery value in other fisheries

Statewide, the commercial value of Chinook salmon is relatively small as a proportion of all salmon landings (6.17% of the 2002-2011 average exvessel value) but in some areas of the State, Chinook is very important to the commercial fisheries. Nowhere is this relative importance more apparent than on the Yukon River, where commercial fishing is one of the few sources of cash in one of the most economically depressed areas of the State. Chinook salmon represents 66% of the commercial fishery value (1977-2011 average) and as much as 86% in the 1990's…a time when troubled chum salmon runs frequently limited commercial fishing opportunity in the fall season. However, this number has dropped to only 15% as poor returns have severely limited or closed commercial Chinook salmon fishing.

In Prince William Sound, Chinook salmon are quite important to the drift gillnet fleet fishing on the Copper River flats. As a proportion of their total income, kings represent 13.75% of the drift gillnet fleet's overall exvessel earnings (1999-2008 average)(Botz, et. al., 2010), and are an especially important part of their early-season income. Copper River Chinook salmon, along with the early sockeye salmon, command a world reputation as one of the first fish to arrive in the spring. Media reports anxiously await the arrival of these fish each May as the first fishery opener approaches and fishermen can sometimes fetch 8 to 9 dollars a pound for these early fish.

Chinook salmon are an incredibly important fishery resource to the commercial troll fleet in southeast Alaska. Since 1996, the troller's annual harvest has averaged 230,718 Chinook salmon (Skannes, Hagerman and Shaul, 2011). In 2011, Chinook salmon comprised 46% of the $28.3 million exvessel value of all salmon species caught by trollers (Dale Kelley, Alaska Trollers Association, personal communication). The winter troll fishery is also an important source of fishery income for during the slower times of year and these fresh fish often fetch upwards of $30/pound or more in Seattle (see figure 5).



Figure 5. Fresh southeast Alaska troll-caught Chinook salmon at a Seattle fish market. (photo courtesy www.alaskaoutdoorsdirectory.com)

SPORT FISHERY

The sport fishery of Chinook salmon to Alaska is immense. While estimates for the dollar value of Chinook salmon to sport fishing is not available, total sport fishing and related expenditures in Alaska are estimated at $1.4 billion, annually (Southwick Associates, 2008). Beside the dollar value, of course, is the recreational value to Alaskans and the immeasurable value of the allure of

catching a world-record sized fish (see figure 6).



Figure 6. Les Anderson with his record 97 pound, 4 ounce Chinook salmon caught in the Kenai River on May 17, 1985. This State record still stands.

NEED FOR A DEDICATED CHINOOK SALMON RESEARCH FUND

Despite considerable declines in various regions of Alaska, there is no dedicated research program prepared to further address the Chinook salmon variations or work toward developing better tools for managers, except for the remaining work the AYK SSI funded with funds provided by the AK Legislature.

- ADF&G continues their in-river stock assessment work and in-season management.
- However, on its own, ADF&G in-season assessment and management is not capable of understanding the causes of the decline, or able to reliably forecast or produce a range of possible actions for responding to these declines.

To understand the trends and causes of variation in abundance of Chinook salmon, information concerning population biology, freshwater ecology, marine ecology, and population dynamics are needed to understand the variables controlling population abundance and trends.

Knowledge gaps remain across the State of Alaska indicating that a multi-disciplinary research effort is needed to investigate the role of physical habitat, climate induced environmental variability, and biological response in Chinook salmon populations if we are to meet the needs of Alaskans.

Until we better understand the drivers of the decline:

- We don't know if the ADF&G management approach is making things better or worse.
- We don't know if escapement goals are adequate.
- We don't know if declines are being driven by human impacts or by large scale environmental shifts in ocean productivity.
- We cannot forecast or respond to these major shifts in salmon abundance.

Funding is needed for an integrated science-based program of research focused on Chinook salmon.

- We need a dedicated program to understand and address the causes of the declines of Chinook salmon throughout both the freshwater and marine environments,
- This research program must draw on the best available peer-reviewed science, synthesizing information from diverse fields including: population biology, freshwater and marine ecology, oceanography, genetics, modeling and statistics.
- It must facilitate coordinated efforts among diverse partners in Native organizations, state agencies, federal agencies, universities and private sector.

This legislation would create a stable, long-term source of funding to support high quality interdisciplinary research to gain an improved understanding of, for example, the dynamics of marine ecosystems - essential to provide fisheries managers with better forecasts and improved responses to changing environmental conditions.

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YUKON RIVER DRAINAGE FISHERIES ASSOCIATION

February 27, 2012

State Capitol, Room 411
Juneau, AK 99801-1182

Re: Support for House Bill 332

Dear Representative Herron:

The Yukon River Drainage Fisheries Association (YRDFA) appreciates the opportunity to support House Bill 332 establishing the Alaska Chinook research and restoration endowment fund. YRDFA is an association of commercial and subsistence fishermen and women on the Yukon River in Alaska with a mission of promoting healthy, wild fisheries and cultures on the Yukon River. The region we represent is home to some of the world's most magnificent salmon resources, and the world's furthest migrating salmon runs on the Yukon River. These salmon provide a primary source of food and are essential to the continued viability of the subsistence way of life in Western Alaska. For many residents the commercial salmon harvest also provides the only means of income for those who live in the remote villages of the Yukon River. Salmon represents an essential part of the culture, diet and economy in our region.

The Chinook salmon which are such a critical foundation for cultures, communities and economies along the Yukon River have declined dramatically in recent years. Yukon River Chinook salmon runs declined to disaster levels from 1998 to 2002. After a brief improvement from 2003 to 2006, runs have declined since, with escapement goals to Canada not met in 2007, 2008, or 2010, and subsistence harvests restricted. Overall, "mean run size of Canadian-origin Chinook for the period 1998-2010 declined 45% compared to the period 1982-1997."[1]

Subsistence harvest opportunities have been severely reduced in recent years, and in 2008, 2009, and 2010 (2011 data not yet available) harvests were below the BOF-determined Amounts Reasonably Necessary for Subsistence (ANS). To protect king salmon, directed commercial fishing for king salmon was eliminated, commercial chum salmon fishing was restricted, and sale of king salmon caught in the chum salmon fishery was at times prohibited. Even when escapement goals have been met, subsequent returns from these escapements have been poor. While the direct cause is unknown, poor runs have low recruits-per-spawner.

Declines in Chinook salmon runs have had dramatic effects on Yukon River communities. Subsistence fisheries have been greatly reduced, disrupting the culturally important practices of going to fish camp in

[1] Spaeder, J. and M. Catalano, Compilation of Evidence for Long-term Decline and Periodic Low Returns of AYK Region Chinook Populations, Report to Arctic-Yukon-Kuskokwim Sustainable Salmon Initiative Chinook Expert Panel, Oct. 15, 2011.

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WWW.YUKONSALMON.ORG

the summer. The commercial Chinook salmon fishery—one of the only sources of cash income in many of these communities—has been virtually eliminated.

While we know that all of these reductions in harvest have been necessary to meet escapements and protect the Yukon River Chinook salmon stock, very little information is available to indicate the reason for these huge declines in run sizes. Theories on causation abound, but much additional research is needed to determine the cause and either reverse the decline or plan for future run sizes.

To investigate the causes of these declines it is critical that there is a dedicated and consistent source of funding for Chinook salmon research. This type of research needs to be well-coordinated and funded over an extended time-period. To study and understand the impacts and effects of population biology and dynamics, freshwater and marine ecology, physical habitat and the many other factors impacting Chinook salmon populations it is essential that long-term funding is dedicated to these purposes.

We are well aware that there have been recent efforts to work toward understanding the trends in variability and we are grateful for the federal funds that were made available to achieve that goal. However, there are extensive gaps in Alaska, and while these recent efforts contributed very valuable information, much more research is needed to understand and reverse these trends. In addition, recent efforts have been focused on only a portion of the state, and a statewide approach to this issue is important. A statewide effort, such as HB332, would be an important step towards providing Alaska's residents with a better understanding of our Chinook salmon stocks and the security of knowing that the State of Alaska is thoroughly engaged in investigating the current declines. It is critical that we take this kind of proactive approach to addressing our stock declines now.

There is no fish more iconic to Alaskans than the Chinook salmon. On the Yukon River this fish is not merely an icon, but a critical component of physical and cultural survival. It is vital and essential that the State of Alaska invest in understanding and recovering our Chinook salmon runs by establishing a dedicated research and restoration endowment fund via House Bill 332.

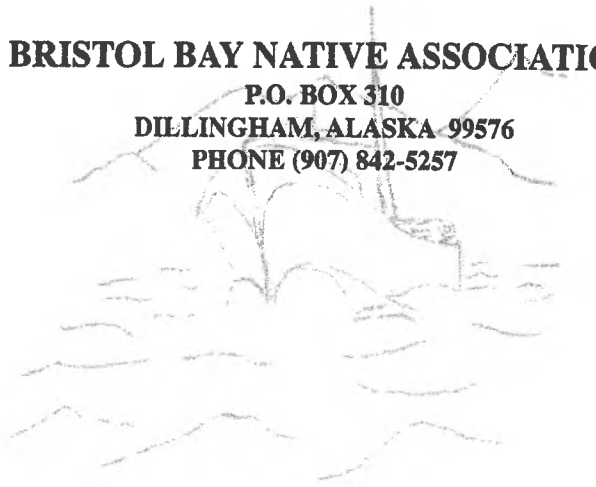
Thank you for your consideration of our comments. If you have any questions or would like additional information please feel free to contact me.

Sincerely,

Jill Klein

Jill Klein
Executive Director

BRISTOL BAY NATIVE ASSOCIATION
P.O. BOX 310
DILLINGHAM, ALASKA 99576
PHONE (907) 842-5257



Tribal Councils Served by BBNA:

Aleknagik
Chignik Bay
Chignik Lagoon
Chignik Lake
Clarks Point
Dillingham
Egegik
Ekuk
Ekwok
Igiugig
Iliamna
Ivanof Bay
King Salmon
Kokhanok
Koliganek
Levelock
Manokotak
Naknek
New Stuyahok
Newhalen
Nondalton
Pedro Bay
Perryville
Pilot Point
Port Heiden
Portage Creek
South Naknek
Togiak
Twin Hills
Ugashik

February 29, 2012

RE: Letter of Support for the bill that creates the ALASKA CHINOOK SALMON RESEARCH AND RESTORATION ENDOWMENT FUND

To Whom It May Concern:

On behalf of the Bristol Bay Native Association (BBNA), it is with great pleasure I provide a letter of support for the ALASKA CHINOOK SALMON RESEARCH AND RESTORATION ENDOWMENT FUND. BBNA is a Tribal consortium of 31 Bristol Bay Tribes. BBNA has much in common with its neighbors to the north and partners and supports its counterparts in the Arctic, Yukon, and Kuskokwim regions.

Chinook salmon is an important staple food for the Alaska Native people and others in the Western Alaska. They are also an economically important species for a number of commercial fisheries and a prized sport fishing resource. Chinook salmon stocks are highly valued and essential to the basic way of life in Western Alaska.

Chinook salmon populations have suffered significant fluctuations in abundance during the past 40 years, yet little is known about the factors influencing their populations. Eight of the 14 currently listed "stocks of concern" are Chinook salmon stocks.

A decline in Chinook salmon causes severe hardship and anxiety for the salmon-dependent people in Western Alaska. Limited commercial fishing on Chinook salmon has occurred in recent years and earnings have declined significantly. Poor Chinook salmon returns produce tension and conflict between fishery user groups competing for the same fishery resource.

The bill creates a stable, long-term source of funding for high quality interdisciplinary research such as the Arctic-Yukon-Kuskokwim Sustainable Salmon Initiative (AYK SSI). AYK SSI Research results and information is being utilized in a wide variety of ways to support sustainable salmon management. It analyses escapement goals and helps to gain better an understanding of marine ecosystems. It helps to provide fisheries managers with better forecasts and improved responses to changing environmental conditions.

BBNA fully endorses the Alaska Chinook Salmon Research and Restoration Endowment Fund. I respectfully request your support of the bill when it comes before your legislative body.

Sincerely,

Ralph Anderson
President & Chief Executive Officer
Bristol Bay Native Association

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TEL: (907) 443-5231 • FAX: (907) 443-4452

SERVING THE VILLAGES OF:
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SAVOONGA
SHAKTOOLIK
SHISHMAREF
SOLOMON
STEBBINS
ST. MICHAEL
TELLER
UNALAKLEET
WALES
WHITE MOUNTAIN

February 6, 2012

Senator Donny Olson
Representative Neal Foster
Representative Reggie Joule

Dear Senator Olson, Representatives Foster and Joule:

On behalf of Kawerak Incorporated, I am writing to express our support for Senator Hoffman, Olson and Representative Herron's bill which would create the **ALASKA CHINOOK SALMON RESEARCH AND RESTORATION ENDOWMENT FUND (ACSRRF).**

I am enclosing a spread sheet which shows the return of Chinook and other salmon to the Seward Peninsula. Two years ago, we sought to have a Chinook and Chum disaster declared by the Department of Commerce for the stocks in the Norton Sound. We were not successful because while the Chinook return was way down, commercial fishermen in southern Norton Sound were able to offset their losses by fishing other stocks, therefore no economic loss occurred. Here in Northern Norton Sound, our commercial fisheries have been closed for so long; an economic disaster declaration is not possible, since a disaster is determined by the decline over the previous 5 years average fishing income.

This is not an "income" issue. Our stocks are so depressed that we wonder if the stocks themselves will survive. Yet there does not seem to be a sense of urgency on the part of the department to turn this situation around.

We fully support the funding and creation of the ACSRRF as a means to help ensure sustainable uses of wild salmon for future generations.

Sincerely,

KAWERAK INCORPORATED

Loretta Bullard
President

Fish numbers of surrounding rivers

Escapement Goal	Snake	2003	2004	2005	2006	2007	2008	2009	2010	As of 8/23/11	As of 10/6/11
1,600-2,500	Chums	2,201	2,146	2,967	4,106	8,147	1,244	891	6,973	4,323	4,323
	Pinks	2,856	126,917	13,813	74,028	4,634	145,761	769	51,099	6,997	7,011
	Silvers	489	474	2,948	4,776	1,781	5,206	50	2,243	83	343
	Kings	50	17	31	32	61	13	6	43*	1	1
	Sockeye	84	22	275	302	1,354	143	2	124*	7	14
Nome	Nome	2003	2004	2005	2006	2007	2008	2009	2010	2011	2011
2,900-4,300	Chums	1,957	3,903	5,584	5,677	7,034	2,607	1,565	5,906	3,442	3,582
3150?	Pinks	11,402	1,051,146	285,759	578,555	24,395	1,186,554	16,490	165,931	14,312	14,403
	Silvers	548	2,283	5,848	8,308	2,437	4,605	1,370	4,114	453	1,833
	Kings	12	51	69	43	13	28	30	9*	8	12
Eldorado	Eldorado	2003	2004	2005	2006	2007	2008	2009	2010	2011	2011
6,000-9,200	Chums	3,591	3,277	10,369	42,105	21,312	6,746	4,943	21,211	16,227	16,227
	Pinks	173	60,866	12,356	222,348	833	244,641	1,119	48,136	489	489
	Silvers	115	1,151	689	55	2	38	2	2*	1	1
	Kings	29	25	32	41	14	36	31	23*	3	3
Niukuik	Niukuik	2003	2004	2005	2006	2007	2008	2009	2010	2011	2011
>23,000	Chums	20,018	10,770	25,598	29,199	50,994	12,078	15,879	45,561	23,496	23,607
10,500	Pinks	75,855	975,895	270,424	1,371,919	43,617	669,234	24,204	434,205	15,338	15,425
2,400-7,200	Silvers	1,282	2,064	2,727	11,169	3,498	13,779	6,861	9,042	1,616	2,405
	Kings	179	141	41	39	30	33	204	15*	18	18
Pilgrim	Pilgrim	2003	2004	2005	2006	2007	2008	2009	2010	2011	2011
No Goal	Chums	15,200	10,239	9,685	45,361	35,334	24,550	5,427	25,379	38,963	41,740
	Pinks	14,100	50,760	13,218	17,701	3,616	92,471	483	29,239	3,337	3,364
	Silvers	677	1,102	304	973	605	260	18	272*	39	269
	Kings	1,016	925	216	275	501	137	52	44*	40	44
	Sockeye	42,729	85,417	55,951	52,323	43,342	20,452	953	1,654*	8,404	8,449
North River	North River	2003	2004	2005	2006	2007	2008	2009	2010	2011	2011
No Goal	Chums	9,859	10,036	11,984	5,385	8,046	9,502	9,798	16,131	18,140	19,898
25,000	Pinks	280,212	1,162,978	1,670,934	2,169,890	583,320	241,798	190,291	150,807	123,334	150,807
550-1,100	Silvers	5,837	11,187	19,189	9,835	19,944	15,648	22,276	7,608	1,662	3,624
1,200-2,600	Kings	1,452	1,125	1,015	906	1,948	903	2,355	1,256	864	864
Kwiniuk	Kwiniuk	2003	2004	2005	2006	2007	2008	2009	2010	2011	2011
11,500-23,000	Chums	12,123	10,362	12,083	39,519	27,756	9,483	8,739	71,403	31,595	31,604
8,400	Pinks	22,329	3,054,684	341,048	1,347,090	54,255	1,444,213	42,962	634,169	29,936	30,023
650-1,300	Silvers	5,490	11,240	12,950	22,341	9,429	10,462	8,677	8,058	2,178	3,288
	Kings	744	663	342	195	258	237	444	138	57	57

NORTON SOUND
ECONOMIC
DEVELOPMENT
CORPORATION

Serving the fisheries of the Bering Strait Region

Brevig Mission Diomede Elim Gambell Golovin Koyuk Nome Saint Michael Savoonga Shaktoolik Stebbins Teller Unalakleet Wales White Mountain

February 29, 2012

Honorable Steve Thompson, Chair
House Fisheries Committee
State Capitol
Juneau, AK 99801

Honorable Bob Herron
House Fisheries Committee
State Capitol
Juneau, AK 99801

Honorable Neal Foster
State Capitol
Juneau, AK 99801

Re: HB332

Dear Representatives Thompson, Herron and Foster,

The Chinook salmon is unrivaled in its importance as a commercial, subsistence and cultural mainstay in Western Alaska. For the health of this prized resource and that of our 15 member communities, Norton Sound Economic Development Corporation supports the creation of an Alaska Chinook Salmon Research and Restoration Endowment Fund. We are particularly interested in the research of the Bering Sea Chinook stocks and their common life history and associated causes of decline.

As the Community Development Quota entity representing the Norton Sound/Bering Strait region, NSEDC strives to provide opportunity for residents of its member communities. This includes working to ensure ample opportunity for both commercial and subsistence fishing. Through our Norton Sound Fisheries Research and Development division, NSEDC has invested millions of dollars into research, monitoring and salmon enhancement efforts in regional watersheds.

While NSEDC believes its scientific work in fisheries aligns with our mission to develop and promote sustainable economies in our region, the financial support of research and restoration efforts needs to be both augmented and derived from additional sources. We believe the creation of an endowment fund would provide the mechanism for stable and significant contributions to such work. Beyond financial support, an endowment should also provide a peer-reviewed process that directs a unified investigation, reducing duplicative efforts.

The need for restoration and research efforts to understand and counter the decline of Chinook salmon is indisputable. The effects of fewer Chinooks returning to many of the state's rivers have reverberated

across Alaska. In the Norton Sound region, the implications have ranged from lost wages to suspended subsistence practices. As the operator of the only commercial seafood plants in the region, NSEDC has witnessed the costly toll of lost commercial fishing opportunity for Chinook salmon. A once-vibrant commercial fishery and significant source of income has vanished in eastern Norton Sound.

The effects of reduced Chinook stocks on commercial fishing have not been solely limited to kings. For several years now, fishermen in the eastern Norton Sound region have had to stand by and miss out on chum salmon harvest opportunities due to Chinook salmon conservation measures. These communities not only suffer the sting of lost commercial and subsistence opportunities for Chinooks, they feel the added pain of lost wages from a salmon stock that still allows a viable commercial harvest. Commercial fishing is one of the few consistent employment opportunities for many in the Norton Sound region.

NSEDC recognizes the creation of a Chinook Salmon Research and Restoration Endowment Fund as a significant and positive step in addressing shortages in the numbers returning Chinook, as well as the information as to why this is occurring. Considering salmon spend their lifecycle in both federal- and state-managed waters, it is our hope that such a fund would encourage cooperative research and restoration efforts involving both levels of government.

We at NSEDC are encouraged to see this proposal before the Legislature and urge its passage. Further delay in working to understand and reverse the decline of Chinook salmon populations hurts our traditions, economies, communities and, ultimately, the state of Alaska as a whole.

Respectfully,

Janis Ivanoff
President & CEO

cc: Dan Harrelson, NSEDC Chairman

Alaska Chapter SCI
PO Box 770511
Eagle River, AK 99577
(907) 980-9018

March 1, 2012

The Honorable Steve Thompson, Chair
Alaska State House
Special Committee on Fisheries
State Capitol, Room 428
Juneau, AK 99801

Dear Representative Thompson,

SCI Alaska Chapter is the leading hunter-conservationist organization in the world, as well as here in Alaska. It is our mission to promote conservation of species and the freedom to hunt. Our record here in Alaska clearly illustrates our commitment to that mission from leading the fight against anti-hunters at the ballot box to leading the wood bison restoration project, we are as our motto says, "First for Hunters".

We are writing today to express our support for HCR 25 regarding the commemoration of the Wildlife Restoration Act. This act was made possible by the tireless work of hunter-conservationists who requested that the hunting community be taxed to pay for wildlife. It would be well to remember that this request came during the Great Depression when many Americans were facing financial hardship. Despite that obstacle, hunters pursued and won the creation of the Wildlife Restoration Act agreeing to pay a tax in order to support wildlife conservation.

We ask you as you consider this legislation to remember that we hunters support the user pay system and feel that it is more than fitting the creation of that system be recognized by HCR 25. Please pass this resolution from your committee at your earliest convenience.

Sincerely,

Terry C. Holliday

Terry Holliday
President

cc: Rep. Mark Neuman

SCI's Top Gun Chapter

HCR

13

<TARGET><BILL>HCR 13</BILL><SUBJECT>HCR 13</SUBJECT><COMM>HFSH27</COMM></TARGET>

ALASKA STATE LEGISLATURE

Rep. Steve Thompson, Chair
Alaska State Capitol, Rm. 428
Juneau, Alaska 99801
Phone: (907) 465-3004
Fax: (907) 465-2070

Members:
Rep. Johnson, Vice-Chair
Rep. Austerman
Rep. Herron
Rep. Pruitt
Rep. Kawasaki
Rep. Miller

HOUSE SPECIAL COMMITTEE ON FISHERIES

SPONSOR STATEMENT FOR HOUSE CONCURRENT RESOLUTION NO. 13 (27-LS0802\A)

The North Pacific Fishery Management Council (NPFMC) is one of eight regional councils established by the Magnuson-Stevens Fishery Conservation and Management Act to oversee management of the nation's fisheries. The North Pacific Fishery Management Council has jurisdiction over the million square mile Exclusive Economic Zone (EEZ) off Alaska. NPFMC manages federal fisheries in Alaska valued at over one billion dollars annually, with primary responsibility for ground fish management in the Gulf of Alaska, Bering Sea, and Aleutian Islands, including cod, Pollock, flatfish, mackerel, sablefish, and rockfish species.

The Council has eleven voting members and four non-voting members. The eleven voting members include the Commissioner of the Department of Fish & Game, Director of the Washington Department of Fish & Wildlife, Director of the Oregon Department of Fish & wildlife, the Alaska Regional Administrator of NOAA Fisheries, five public members appointed by the Governor of Alaska, and two public members appointed by the Secretary from the State of Washington.

Since, it is estimated that 95 percent of rural households consume fish caught for subsistence, and sports fishing contributes over one-hundred and twenty three million dollars annually, their voices are vital to the sustainability of the resource and should be represented at the North Pacific Fishery Management Council. Both sports fish licensees and Alaska subsistence users who have participated in NPFMC meetings have commonly expressed frustration with the lack of opportunity to meaningfully participate in the process, and a lack of representation on the Council. However, allocation of fish in waters managed by NPFMC directly affects the quantity of fish available for harvest by sports fish licensee and subsistence users.

HCR 13 requests that the Governor designate both a sports fish licensee and a subsistence user for a seat on the North Pacific Fishery Management Council. In a state that is home to 3,000 rivers, 3,000,000 lakes and 6,640 miles of coastline, protecting opportunities for sports fishers and subsistence users is vital.

E-Mail: Representative.Steve.Thompson@legis.state.ak.us

27-LS0802\A.3
Bullard
1/26/12

AMENDMENT #1

OFFERED IN THE HOUSE BY REPRESENTATIVE HERRON

TO: HCR 13

Page 1, line 3:

Delete "**a subsistence user**"

Insert "**an individual nominated by an Alaska Native organization that represents rural subsistence users**"

Page 1, following line 14:

Insert new material to read:

"**WHEREAS** the Pacific Fishery Management Council, whose jurisdiction consists of the exclusive economic zone off the coasts of Washington, Oregon, and California, includes a voting member nominated by a federally recognized Native American tribe; and

WHEREAS Alaska's Native peoples have the right under federal law to take, for subsistence purposes, fur seals and other marine mammals, sea birds and other migratory waterfowl, and certain species listed under the Endangered Species Act of 1973, all of which are affected by decisions made by the North Pacific Fishery Management Council, yet the federally recognized tribal governments of those peoples are not represented on the council; and"

Page 2, lines 16 - 17:

Delete "a subsistence user"

Insert "an individual nominated by an Alaska Native organization that represents rural subsistence users"

FISCAL NOTE

STATE OF ALASKA
2012 LEGISLATIVE SESSION

Bill Version: **HCR 13**
Fiscal Note Number: 1
() Publish Date:

Identifier (file name):
Title: Requesting the governor to designate one seat...for a sport fish licensee and...for a subsistence user.
Sponsor: House Special Committee on Fisheries
Requester: House Special Committee on Fisheries

Dept. Affected: Governor's Office
Appropriation: 0
Allocation:
OMB Component Number:

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	FY13 Appropriation Requested	Included in Governor's FY13 Request	Out-Year Cost Estimates				
OPERATING EXPENDITURES	**FY13**	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**
Personal Services							
Travel							
Services							
Commodities							
Capital Outlay							
Grants, Benefits							
Miscellaneous							
TOTAL OPERATING	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

FUND SOURCE		(Thousands of Dollars)						
1002	Federal Receipts							
1003	GF Match							
1004	GF							
1005	GF/Prgm (DGF)							
1037	GF/MH (UGF)							
1178	temp code (UGF)							
TOTAL		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

POSITIONS							
Full-time							
Part-time							
Temporary							

CHANGE IN REVENUES	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Estimated SUPPLEMENTAL (FY12) operating costs 0.0 *(separate supplemental appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Estimated CAPITAL (FY13) costs 0.0 *(separate capital appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Why this fiscal note differs from previous version (if initial version, please note as such)

Prepared by: Jane W. Pierson,Aide,
Division: House Special Committee on Fisheries
Approved by: Representative Steve Thompson, Chair
House Special Committee on Fisheries

Phone: 465-3004
Date/Time: 1/25/2012 12:56pm
Date: 1/25/2012

(Revised 11/18/2011 OMB)

FISCAL NOTE

STATE OF ALASKA
2012 LEGISLATIVE SESSION

BILL NO. HCR 13

Analysis

There are no significant fiscal impacts for the Governor's office associated with this bill.

'OUSE COMMITTEE REPOF

(7)
Date Referred to Committee: April 9, 2011 **FURTHER REFERRALS:**

Date of Committee Action: 1/26/12

The HOUSE SPECIAL COMMITTEE ON FISHERIES considered: **HCR 13**

HOUSE CONCURRENT RESOLUTION NO. 13
Requesting the governor to designate one seat on the North Pacific Fishery Management Council for a sport fish licensee and one seat on the North Pacific Fishery Management Council for a subsistence user.
HCR 13-NORTH PACIFIC FISHERY MANAGEMENT COUNCIL

Recommends it be replaced with [ ] HCS *or* [✓] CS for HCR13 (FSH)
For Senate Bills with new title: [ ] Technical Title [ ] New Title: HCR _____ **[ ] Same Title [✓] New Title**

[ ] attach amendments
[ ] add new referral to _____Committee
[ ] Letter of Intent_____Committee

List of Abbrev for Depts.:
ADM
CED
COR
CRT
EED
DEC
DFG
GOV
DHS
LWF
LAW
LEG
MVA
DNR
DPS
REV
DOT
UA

NEW FISCAL NOTES
*FN# is assigned by Chief Clerk's Office

*FN#	List by Dept(s):	Fiscal	Indet.	Zero
1	GOV			✓

PREVIOUS FISCAL NOTES

FN#	List by Dept(s):	Fiscal	Indet.	Zero

Signing with recommendations	Printed Last Name	DP	DNP	NR	AM
		X			
	HERRON	X			
	Pruitt	X			
	Austerman			X	
Robert J. Miller	MILLER	X			
Chair:	THOMPSON	X			
Chair:					

Larry Cotter Pacific Associates 116 Gold Juneau, AK 99801	3 years 3 years	8/11/86 8/11/89	8/10/89 8/10/92
Joe Demmert, Jr. 2724 4th Avenue Ketchikan, AK 99901	3 years	8/11/80	8/10/83
Oscar Dyson (Deceased) - (wife Peggy) Box 1728 Kodiak, AK 99615	3 years 3 years 3 years	8/11/85 8/11/88 8/11/91	8/10/88 8/10/91 8/10/94
Douglas B. Eaton Box 2871 Kodiak, AK 99615	3 years 3 years	8/11/76 8/11/79	8/10/79 8/10/82
Henry F. Eaton 216 Maple Kodiak, AK 99615	1 year	8/11/76	8/11/77
Ben Ellis Ben Ellis & Company P.O. Box 203 (913 Keystone) Soldotna, AK 99669	to fill remainder of Bob Penney term	1/20/03	8/10/06
Dr. David L. Fluharty School of Marine Affairs University of Washington 3707 Brooklyn NE, HF-05 Seattle, WA 98105	3 years 3 years 3 years	9/7/94 8/11/97 8/11/00	8/10/97 8/10/00 8/10/03
Arne Fuglvog P.O. Box 71 Petersburg, AK 99833	3 years 3 years	8/11/03 8/11/06	8/10/06 ~~8/10/09~~ (resigned 8/06)
Ronald E. Hegge (wife Kathy) 314 Lansbrook Venice, FL 34212	3 years 3 years	8/11/89 8/11/92	8/10/92 8/10/95

Sara Hemphill 300 Lenora St, #B353 Seattle, WA 98121	3 years	8/11/83	8/10/86
Doug Hoedel 2111 Sorbus Way Anchorage, AK 99508	3 years	8/11/04	8/10/07
Gordon Jensen P.O. Box 264 Petersburg, AK 99833	3 years	8/11/77	8/10/80
Tony Knowles 1146 "S" Street Anchorage, AK 99501	3 years	8/11/88	~~8/10/91~~ (Resigned 12/89)
Joe Kyle Pacific Associates 234 Gold Juneau, AK 99801	3 years	8/11/97	8/10/00
Richard B. Lauber (Diane) Pacific Seafood Processors 321 Highland Drive Juneau, AK 99801 (Chair 3/91 – 8/00)	* 3 years 3 years 3 years	1/13/90 8/11/91 8/11/94 8/11/97	8/10/91 (*filled remainder of Tony Knowles' term) 8/10/94 8/10/97 8/10/00
Harold E. Lokken Fishermen's Terminal West Wall Bldg, Rm 232 4005 20th Avenue W. Seattle, WA 98199 (Chairman 10/77 – 9/78) (Vice Chair 10/78 – 8/84)	2 years 3 years 3 years	8/11/76 8/11/78 8/11/81	8/10/78 8/10/81 8/10/84
Stephanie Madsen At-Sea Processors Assn. PO Box 32817 Juneau, AK 99801 (Chair 10/03 – 8/07)	3 years 3 years	8/11/01 8/11/04	8/10/04 8/10/07
Donald L. McKernan (Deceased) Institute of Marine Studies Univ. of Washington, HA-35 Seattle, WA 98105	3 years	8/11/76	8/10/79 (deceased, Spring 1979)

Charles H. Meacham, Sr. P.O. Box 428 Sequim, WA 98382	2 years 3 years	8/11/76 8/11/78	8/10/78 8/10/81
Gerry Merrigan* *(voting member)* Prowler Fisheries PO Box 1364 Petersburg, AK 99833	3 years	8/11/06*	8/10/09 *Replaced Arne Fuglvog who was reappointed, but resigned August 2006
Henry Mitchell 8054 Sundi Way Anchorage, AK 99502	3 years 3 years 3 years	8/11/84 8/11/87 8/11/90	8/10/87 8/10/90 8/10/93
Hazel Nelson Bristol Bay Economic Development Corporation 2909 Arctic Blvd. Ste 203 Anchorage, AK 99503	3 years	8/11/02	8/10/05
Kevin O'Leary (wife Susan) 4044 Cliffside Rd. Kodiak, AK 99615	3 years 3 years	8/11/95 8/11/98	8/10/98 8/10/01
Robert C. Penney 3620 Penland Parkway Anchorage, AK 99508	3 years	8/11/00	~~8/10/03~~ (resigned 10/8/02) Replaced by Ben Ellis for remainder of term
Walter T. Pereyra ProFish International 400 North 34th St, Ste 303 Seattle, WA 98103 (Vice Chair 1994 – ????)	3 years 3 years 3 years	8/11/90 8/11/93 8/11/96	8/10/93 8/10/96 8/10/99
Rudy Petersen North Pacific Fishing, Inc. 4029 2lst Ave. W., #201 Seattle, WA 98199	3 years 3 years	8/11/82 8/11/85	8/10/85 8/10/88
John Peterson 6120 E. Calle Alta Vista Tucson, AZ 85715-3101 (Chair 9/88 – 8/89)	3 years 3 years	8/11/84 8/11/87	8/10/87 8/10/90
Ed Rasmuson Attn: Wells Fargo P.O. Box 196127	3 years 3 years	8/11/03 8/11/06	8/10/06 ~~8/10/09~~ (resigned 12/07)

Anchorage, AK 99519			
Elmer Rasmuson (Deceased) (wife Mary Louise) National Bank of Alaska P.O. Box 600 Anchorage, AK 99510 (Chair 1976 – 1977)	3 years	8/11/76	~~8/10/79~~ (resigned 11/77)
Robin Samuelsen (wife Judy) P.O. Box 412 Dillingham, AK 99833	3 years 3 years 3 years	8/11/93 8/11/96 8/11/99	8/10/96 8/10/99 8/10/02
Keith Specking (Vi) P.O. Box 1018 Eagle Point, OR 97524	3 years	8/11/81	8/10/84
Jeffrey R. Stephan (Kathy) United Fishermen's Marketing Assn. P.O. Box 1035 Kodiak, AK 99615	3 years	8/11/82	8/10/85
Clement V. Tillion (Diana) P.O. Box 6409 Halibut Cove, AK 99603 (Chair 1978 – 1983)	1 year 3 years 3 years 3 years	8/11/76 8/11/77 8/11/80 8/11/94	8/10/77 8/10/80 8/10/83 8/10/97
John Winther (Bert) P.O. Box 509 Petersburg, AK 99833	3 years 3 years	8/11/83 8/11/86	8/10/86 8/10/89

PAST Council members	Term	Begin	End
AGENCY REPRESENTATIVES:			
Commissioner Alaska Dept. of Fish and Game P.O. Box 25526 Juneau, AK 99802	Perpetual	8/11/76 7/2/77 1/83 1/91 1/95 1/03 4/03 11/04 8/05 1/07 ? ?	7/1/77 James Brooks 1/83 Ronald Skoog 12/90 Don Collinsworth (Chair 9/89-12/90) 12/94 Carl Rosier/Alts: Clem Tillion, David Benton-12/94 1/03 Frank Rue/Alts: Kevin Duffy 9/00, Earl Krygier 3/03 Kevin Duffy, Acting Commis./Earl Krygier, Alt 10/04 Kevin Duffy, Commissioner/Earl Krygier, Alt 7/05 Doug Mecum, Acting Commis./Earl Krygier, Alt 12/07 McKie Campbell, Commissioner/Earl Krygier, Alt ? Denby Lloyd, Acting Commis./Earl Krygier, Alt. ? Denby Llody/Dave Bedford, Alt pres Denby Llody/Stefanie Mooreland, Alt.
Director, Alaska Region National Marine Fisheries Service P.O. Box 21668 Juneau, AK 99802	Perpetual		4/80 Harry L. Rietz 5/88 Robert W. McVey 1/89 James Brooks, Acting ? Steve Pennoyer 6/00 Jim Balsiger ? Doug Mecum, Acting 4/10 Jim Balsiger
Director Oregon Dept. of Fish & Wildlife 1400 S.W. 5th Avenue Portland, OR 97207	Perpetual	8/11/76 9/86 2/94	81-85 John Donaldson 1/94 Randy Fisher Rudy Rosen 6/97 Jim Greer 7/01- Lindsay Ball/Bob Mace, Alt. Note: Bob Mace served as Alt from 2nd Council mtg thru 6/01 and was V. Chair 10/99-6/01 (retired) 10/01 Roy Hyder, Alternate
Executive Director *(non-voting member)* Pacific States Marine Fisheries Commission 45 SE 82nd Drive Gladstone, OR 97027	Perpetual	1976 1983 4/87 2/94–present	1982 John Harville 4/87 Lawrence Six 1/94 Guy Thornburgh/Dave Hanson, Alt Randy Fisher/Dave Hanson, Alt
Office of Deputy Asst. Secretary for Oceans & Fisheries Affairs *(non-voting member)* Department of State, Room 7820 Washington, DC 20520	Perpetual	9/76 12/76 3/79 12/85	12/76 Lori Nakatsu 2/79 Carl J. Price 12/85 Ray Arnaudo 6/86 Stetson Tinkham

PAST Council members	Term	Begin	End	
AGENCY REPRESENTATIVES:				
		9/86	6/89	Robert Ford
		9/89	4/90	Jeff Miotke
		4/90	9/90	A. George Herrfurth
		2/93	2/93	Wm. E. Dilday
		9/96	9/06	Stetson Tinkham
		10/06–present		Amanda Johnson-Miller/Nicole Ricci & Nick Klingersmith, Alts.

PAST Council members	Term	Begin	End
AGENCY REPRESENTATIVES:			
Director Washington Dept. of Fish & Wildlife P.O. Box 43135 Olympia, WA 98504-3135	Perpetual	8/11/76 4/77 6/77 12/86 7/92 6/96 12/98	3/77 Donald Moos 6/77 Frank Hau 12/86 William Wilkerson 1/87 Joseph Blum 8/92 Robert Turner/Morris Barker Bern Shanks/Dennis Austin Jeff Koenings/Dennis Austin (V. Chair 9/01-5/05) Jeff Koenings/Bill Tweit Alt, 6/05-pres
U.S. Coast Guard *(non-voting member)* 17th District P.O. Box 3-5000 Juneau, AK 99802	Perpetual	8/11/76 5/19/78 ? 3/1/84 8/1/86 8/89 8/92	4/19/78 RADM J.B. Hayes ? RADM R.A. Duin 2/29/84 RADM R. Knapp 3/84 RADM R. Lucas 9/86 RADM E. Nelson 9/89 RADM D.Ciancaglini 8/92 RADM R. Rufe, Jr. CDR Joe Kyle, Alternate 6/95 RADM R. Riutta CAPT William Anderson, Alt (to 6/96) CAPT Vince O'Shea, Alt (9/96-6/01) 6/97 RADM Terry Cross 6/99 RADM Thomas J. Barrett/O'Shea, Alt. CAPT Richard Preston, Alt (9/01- 6/02 RADM James Underwood/Preston Alt 6/04 RADM Jim Olson/CAPT Mike Cerne, Alt (thru 10/06) 6/06 ADM Gene Brooks/CAPT Cerne, Alt (CDR Lisa Ragone, Alt 11/06-present) ADM Chris Colvin CAPT Mike Cerne CDR Lisa Ragone

PAST Council members	Term	Begin	End
AGENCY REPRESENTATIVES:			
Regional Director *(non-voting member)* U.S. Fish and Wildlife Service 1011 E. Tudor Rd. Anchorage, AK 99503	Perpetual	8/11/76 ? ? ? 3/26/85 1/87 9/94 10/08	? (Jan E. Riffe) ? (Gordon Watson) ? (Keith Shreiner) 3/25/85 (Robert Putz) 3/85 (Robert Gilmore) ? (Walter Steiglitz) 9/94 David Allen, Steve Rideout, Alt (5/96 - 6/99 Everett Robinson-Wilson, Alt) 6/99 D. Alcorn 9/00 Rowan Gould/Anthony DeGange Alt. 8/05 Leonard Corin Actg. 6/06 Tom Melius/Lenny Corin (Alt) 2/07 Tom Melius/Greg Balogh (Alt) pres Geoffrey Haskett/Greg Balogh (Alt)

STATEMENT OF ORGANIZATION, PRACTICES, AND PROCEDURES

of the
NORTH PACIFIC FISHERY MANAGEMENT COUNCIL



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North Pacific Fishery Management Council
Statement of Organization, Practices, and Procedures

The North Pacific Fishery Management Council (Council), created by Section 302(a)(7) of the Magnuson-Stevens Fishery Conservation and Management Act (the Act), hereby publishes a revised Statement of Organization, Practices, and Procedures (SOPP), as required by Section 302(f)(6) of the Act. The SOPPs were originally published on March 1, 1977, and revisions have been adopted by the Council over time. This revised SOPP, which was adopted by the Council at a public meeting in June, 2007, includes changes pursuant to requirements of the recently reauthorized Magnuson-Stevens Act, and other revisions regarding Advisory Panel operations, administrative provisions, and other practices governing Council operations. An additional change was made in June 2008 to modify requirements for AP minority reports. This SOPP shall become effectively immediately, noting that additional changes may be forthcoming, pending additional guidance from NOAA on Magnuson-Stevens Act provisions.

These SOPPs are provided to each member of the Council, its Scientific and Statistical Committee (SSC), and its Advisory Panel (AP). Copies of the SOPP may be obtained by writing the Executive Director, North Pacific Fishery Management Council, Room 306, 605 West Fourth Avenue, Anchorage, Alaska 99501; telephone (907) 271-2809.

1.0 Council Jurisdiction and Functions

The Council's geographic area of authority includes the Exclusive Economic Zone (EEZ) of the Arctic Ocean and Pacific Ocean seaward of Alaska, including the Bering Sea, Aleutian Islands, and Gulf of Alaska. The states of Alaska, Washington, and Oregon are represented on the Council. The Council will:

A. Prepare and submit to the Secretary of Commerce (Secretary) or his delegate a fishery management plan (FMP) with respect to each fishery requiring conservation and management within the Council's geographic area of authority and such plan amendments as are necessary.

B. Review and comment on applications for foreign fishing transmitted to the Council under a governing international fishery agreement by the Secretary of State under the terms of the Act.

C. Prepare comments on any FMP or amendments prepared by the Secretary which are transmitted to the Council under Section 304(c)(4) of the Act.

D. Conduct public hearings at appropriate times and locations in the Council's membership area, to allow interested persons an opportunity to be heard in the development of FMPs and amendments and with respect to the administration and implementation of the provisions of the Act. When conducting a hearing outside Alaska, the Council will first consult with the Council in that area.

E. Submit to the Secretary such periodic reports as the Council deems appropriate, and any other relevant report which may be requested by the Secretary.

F. Review on a continuing basis, and revise as appropriate, the assessments and specifications contained in each FMP for each fishery within its geographical area.

G. Comment on and make recommendations concerning any activity undertaken, or proposed to be undertaken, by any state or federal agency that, in the view of the Council, is likely to substantially affect the habitat of an anadromous fishery resource under its jurisdiction. The Council may comment

on and make recommendations concerning state or federal actions that may affect habitat of other species under its authority.

H. Develop annual catch limits for each of its managed fisheries that may not exceed the maximum acceptable biological catch level recommendations of its Scientific and Statistical Committee (SSC).

I. Develop, in conjunction with the SSC, multi-year research priorities for fisheries, fisheries interactions, habitats, and other areas of research that are necessary for management purposes, that shall establish priorities for 5-year periods; be updated as necessary; and be submitted to the Secretary and the regional science centers of the National Marine Fisheries Service (NMFS) for their consideration in developing research priorities and budgets for the region of the Council.

J. Prepare regulations for the halibut fisheries, consistent with provisions of the Northern Pacific Halibut Act of 1982. The Act provides that, for the halibut fishery off Alaska, the Council may develop regulations, including limited access regulations, to govern the fishery, provided that the Council's actions are not in conflict with regulations adopted by the International Pacific Halibut Commission.

K. Conduct any other activities which are required by or provided for in the Act or which are necessary and appropriate to the foregoing functions.

The Council expects to participate in international negotiations concerning any fishery matters under the cognizance of the Council. The Council also expects to be consulted during preliminary discussions leading to U.S. positions on international fishery matters, including the allocation of fishery resources to other nations within its area of authority.

2.0 Council Organization

The Council has eleven voting members and four non-voting members. The eleven voting members include the Commissioner of the Alaska Department of Fish and Game, Director of the Washington Department of Fish and Wildlife, Director of the Oregon Department of Fish and Wildlife, the Alaska Regional Administrator of NOAA Fisheries, five members appointed by the Secretary from the State of Alaska, and two members appointed by the Secretary from the State of Washington.

The four non-voting members include the Alaska Regional Director of the U.S. Fish and Wildlife Service, the Commander of the Seventeenth Coast Guard District, the Executive Director of the Pacific States Marine Fisheries Commission, and a representative of the U.S. Department of State.

Each voting member appointed to a Council must take the following oath of office:

> *I, _____, a voting member of the Regional Fishery Management Council appointed by the Secretary of Commerce, promise to act as a trustee and steward of our Nation's fishery resources. I will uphold all standards and provisions of the Magnuson-Stevens Fishery Conservation and Management Act; conduct myself at all times according to rules and guidance prescribed by the Secretary; responsibly weigh all information bearing on issues being acted upon by the Council; and vote on such issues with objectivity and fairness. This oath is freely given without mental reservation or purpose of evasion.*

2.1 Officers and Terms of Office

A chair and vice-chair are elected from the voting members of the Council by a majority vote of the voting members present and voting. Both serve for one year and may succeed themselves. They are elected at the

first regular Council meeting held after August 11 (election meeting) and their terms of office expire at the next meeting after August 11 of the subsequent year. If the Council terms of either or both of the officers end before a regular election meeting, the Council shall appoint at the next regular Council meeting interim officers to serve until the next election meeting.

The Council Chair, or in his or her absence the Vice Chair, has authority to convene and adjourn meetings and public hearings and designate members of the Council, SSC, and AP to attend meetings and public hearings. The Chair will control meetings and hearings by recognizing speakers and establishing the order of business.

2.2 Designees

The Act authorizes only the principal state officials, the Regional Administrators, and the non-voting members to designate individuals to attend Council meetings in their absence. The Chair of the Council must be notified in writing, in advance of any meeting at which a designee will initially represent the Council member, of the name, address, and position of the individual designated. A designee may not name another designee. However, such officials may submit to the Chair, in advance, a list of several individuals who may act as designee, provided the list clearly specifies who would serve if more than one designee attends. A designee may be elected as Chair or Vice-Chair of the Council, and as Vice-Chair would serve as Chair in the absence of the elected Chair; however, a designee for an elected Chair cannot serve as Chair. Reimbursement of travel expenses to any meeting is limited to either the member or one designee.

2.2.1 Principal state officials and their designees

Only a full-time state employee of the state agency responsible for marine and/or anadromous fisheries shall be appointed by a constituent state Governor as the principal state official for purposes of section 302(b) of the Act.

A principal state official may name his/her designee(s) to act on his/her behalf at Council meetings. Individuals designated to serve as designees of a principal state official on a Council, pursuant to section 302(b)(1)(A) of the Act, must be a resident of the state and be knowledgeable and experienced, by reason of his or her occupational or other experience, scientific expertise, or training, in the fishery resources of the geographic area of concern to the Council.

New or revised appointments by state Governors of principal state officials and new or revised designations by principal state officials of their designees(s) must be delivered in writing to the appropriate NMFS Regional Administrator and the Council chair at least 48 hours before the individual may vote on any issue before the Council. A designee may not name another designee. Written appointment of the principal state official must indicate his or her employment status, how the official is employed by the state fisheries agency, and whether the official's full salary is paid by the state. Written designation(s) by the principal state official must indicate how the designee is knowledgeable and experienced in fishery resources of the geographic area of concern to the Council, the County in which the designee resides, and whether the designee's salary is paid by the state.

2.3 Advisory Groups

The Council has established two formal advisory groups: a Scientific and Statistical Committee (SSC) and a Fishing Industry Advisory Panel (i.e., the Advisory Panel, or AP), as mandated in Section 302 (g) of the Act. The Council also maintains Plan Teams for each fishery management plan, and appoints standing and ad hoc committees necessary to advise the Council on particular conservation and management issues.

2.3.1 Scientific and Statistical Committee

The Council shall establish, maintain, and appoint the members of a SSC to assist it in the development, collection, and peer review of such statistical, biological, economic, social, and other scientific information as is relevant to the Council's development and amendment of any fishery management plan. The SSC shall provide the Council ongoing scientific advice for fishery management decisions, including recommendations for acceptable biological catch, preventing overfishing, maximum sustainable yield, and achieving rebuilding targets, and reports on stock status and health, bycatch, habitat status, social and economic impacts of management measures, and sustainability of fishing practices.

Members appointed by the Council to the SSC shall be federal employees, state employees, academicians, or independent experts and shall have strong scientific or technical credentials and experience. Independent experts on the SSC and cannot be employed by an interest group or advocacy group. Each member of the SSC shall be treated as an affected individual for purposes of disclosure and financial interest and recusal provisions for SSC members as specified in the Act. Financial interest disclosures for SSC members will be reviewed annually by the Council prior to appointment, and when updated by an SSC member reporting any substantial changes in financial interest. Financial interest disclosures will be kept on file by the Secretary.

The SSC will provide the peer review process for scientific information used to advise the Council about the conservation and management of the fishery. The review process, which may include existing committees or panels, is deemed to satisfy the requirements of the guidelines issued pursuant to section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Public Law 106–554—Appendix C; 114 Stat. 2763A–153).

The SSC is composed of experts in biology, statistics, economics, sociology, and other relevant disciplines from the federal, state, and private scientific communities and other appropriate sources.

A. Objectives and Duties

As requested by the Council, through the Council Chair or the Executive Director, the SSC shall:

1) Provide expert scientific and technical advice to the Council on the development of fishery management policy, fishery management plans and amendments, their goals and objectives, proposed regulations, and criteria for judging plan effectiveness.

2) Assist in the identification, development, collection, and evaluation of statistical, biological, economics, social and other scientific information deemed relevant to the Council's fishery management planning, particularly with regard to determining the best scientific data available as required by National Standard 2.

3) Advise the Council on preparing comments on any relevant fishery management plan or amendment prepared by the Secretary or Secretary's delegate pursuant to Section 304(c) of the Act.

4) Submit to the Council reports deemed appropriate by the Committee or requested by the Council.

5) Perform other appropriate duties as may be required by the Council to carry out its functions under the Act.

6) Serve as the Council's peer review body for influential scientific information pursuant to requirements of the Information Quality Act (Section 515 of Public Law 106-554) and NOAA information quality guidelines.

B. Members and Chair

The SSC members shall be appointed by, and serve at the pleasure of, the Council. They shall be appointed for one year, and may be reappointed. Vacancies may be filled for the remaining unexpired term. The SSC Chair and Vice Chair shall be nominated by the Committee from among its members and confirmed by the Council for one-year terms.

Each statutory agency designated as a member of the North Pacific Fishery Management Council by the Act may have a member on the Scientific and Statistical Committee. That member may have an alternate, although it is expected that the primary member from an agency will attend meetings of the Scientific and Statistical Committee in person whenever possible. The statutory agency may nominate the alternate for their primary member, notifying the chair of the SSC by letter of that selection. Alternates will be appointed for the same period as the primary member (i.e., one year).

Other Scientific and Statistical Committee members may have an alternate on a case-by-case basis (to be approved by the Council Chair or Executive Director in advance of the next meeting) when the member would be unable to participate for an extended period of time. It is expected that those alternates would be experts in the same field as the member and familiar with the work of the SSC and the Council.

The key requirement in appointing members or alternates is for the Council to maintain the highest level of objective scientific and technical expertise. Members should be able to make unbiased and objective scientific recommendations to the Council. Additionally, SSC members shall maintain high standards of ethical conduct, as detailed in Section 6.

C. Administrative Provisions

The SSC shall meet as a whole, or in part, at the request of the Chair of the SSC, with the approval of the Chair of the Council, as often as necessary to fulfill the SSC's responsibilities, taking into consideration time and budget constraints. It is estimated that the SSC will meet at least five times a year, just before the scheduled Council meetings. The SSC shall hold its meetings in conjunction with meetings of the Council, to the extent practicable. The Executive Director of the Council shall provide such staff and other support as the Council considers necessary for SSC activities, within budgetary limitations.

The agenda for each SSC meeting shall be developed by the SSC Chair in consultation with the Deputy Director or Executive Director. SSC meetings will follow established protocols. Following staff reports, the public will have an opportunity to testify on scientific aspects of an issue prior to SSC deliberations. SSC members shall disclose any potential conflicts regarding a particular topic prior to any discussion of that issue. SSC decisions will be reached by consensus, whenever possible; however if a decision is required and consensus cannot be reached, the opinion of the majority will prevail.

Minutes of the meeting shall reflect the discussion and deliberations that were made during the SSC meeting. The SSC Chair, or designee, will be responsible for reporting the SSC's recommendations to the Council.

SSC members shall serve without compensation, but will be paid their actual travel expenses in performing their duties in accordance with applicable law and Council travel policy. Subject to the availability of appropriations, a stipend may be paid to members of the scientific and statistical committees who are not employed by the federal government or a state marine fisheries agency.

2.3.2 Advisory Panel

The North Pacific Fishery Management Council appoints an Advisory Panel (AP) of recognized experts from the fishing industry and several related fields, and represents a variety of gear types, industry and related

interests as well as a spread of geographic regions of Alaska and the Pacific Northwest having major interest in the fisheries off Alaska.

The Council relies on the AP for comprehensive industry advice on how various fishery management alternatives will affect the industry and local economies, on potential conflicts between user groups of a given fishery resource or area, and on the extent to which the United States will utilize resources managed by the Council's fishery management plans.

A. Size

The AP will consist of 20 members. However, the Council will not necessarily keep all seats filled. This arrangement should allow sufficient flexibility in funding so the Council can invite as necessary other individuals with particular expertise to work with the AP on an ad hoc basis.

B. Qualifications

The Council will give highest priority to the following considerations when selecting AP members:

1) Of paramount importance is the demonstrated ability of the candidate to be objective and to consider all aspects of an issue.

2) The AP members should be of top quality and caliber and be committed to full and active participation for each meeting during their term.

3) The candidate should be considered because of the experience he/she brings to the Council rather than his/her political clout or connection.

4) The candidate should be an active, involved member of his/her community and business to ensure the best and most pertinent input into the Council and likewise be responsible and diligent in reporting Council decisions and concerns back to his/her community/business.

5) The AP membership should represent a broad geographic spread both for Alaska and the Pacific Northwest. Representation for the three states should be in the same proportions as those of the voting membership of the Council. However, recognizing that issues and priorities will change, the Council cautions that no seat is reserved for a particular area.

6) The AP membership should represent a variety of interests within the fishing industry and others with interests in maintaining and managing Council fisheries. While it is hoped that major gear types from the harvesting sector will be broadly represented, as with geographic representation, no particular seat is guaranteed to a gear type or fishery.

   Note: It is expected that as the issues and concerns of the Council change and evolve so, too, will the profile of the membership of the AP.

C. Terms

AP members will serve for three-year terms beginning with the first meeting each calendar year. All members will be appointed by and serve at the pleasure of the Council and may be reappointed to two subsequent consecutive terms. Appointments will be staggered to provide for the appointment of 1/3 of the membership of the AP each year. Persons wishing to serve on the Advisory Panel may submit their names with a short resume to the Executive Director who will keep for the calendar year a list of candidates at the Council headquarters. Resumes and requests to serve will not be retained after the annual appointment process. The Council may use this list of candidates in choosing AP members to fill full-year terms or interim vacancies, but may also solicit

individuals not on the list if a particular combination of experience and expertise is deemed desirable. AP members serve at the pleasure of the Council and can be removed by a majority vote of the Council prior to the completion of a full 3-year term. Cause for removal may include, but is not limited to, change in affiliation or status or poor attendance. The Council Chair is authorized to fill interim vacancies on the AP subject to confirmation by the Council at the next regular meeting. Interim appointments are for the remaining unexpired term of the vacancy.

Members of the AP serve without compensation. They may be paid their actual expenses for travel and per diem incurred in the performance of their duties during the days in which the panel is in session. The chair, vice-chair, or the AP member designated to report to the Council may be paid expenses for additional days when necessary and approved by the Council chair. Security clearances for AP members are requested as necessary.

AP members travel reimbursement shall be limited to attendance at formal meetings of the AP, or to the Chair, Vice-Chair, or designee while officially representing the AP with the advance approval by the Executive Director. AP members shall follow the same general travel rules set forth for Council employees. In extenuating circumstances, which must necessarily be related to their fishing or processing activities and with advance notice, the Council chair may authorize travel reimbursement to and from locales other than a AP member's normal home location.

D. Operations

The Chair and Vice-Chair of the AP are nominated for one-year terms by the Panel from among its members and are confirmed by the Council.

The AP meets as a whole, or in part, at the request of the Chair of the AP with approval of the Council Chair, as often as necessary to fulfill the Panel's responsibilities, taking into consideration time and budget constraints. AP members are expected to attend all meetings and participate fully at these meetings including voting on each issue. Poor attendance will be cause for a member being removed. Generally, acceptable absences will be the result of or involve personal emergencies or unavoidable conflicts related to the member's area of expertise.

The AP will set up such workgroups as the Chair of the AP and the Council deem necessary to carry out the Panel's duties. Additional members outside the AP may be added to these workgroups as deemed appropriate by the Council Chair.

The Executive Director, in consultation with the Council Chair, shall assign the agenda topics for the Advisory Panel to discuss at its meetings. These topics will not normally include all items on the Council's agenda, but the AP may consider any topic or issue it deems important to bring to the Council's attention, time permitting and with the concurrence of the Council Chair or Executive Director. The AP members should be given sufficient advance notice of these topics to allow adequate preparation before the meeting.

The AP is expected to conduct meetings in a timely fashion with the objective of presenting AP recommendations to the Council consistent with the Council's order of business. Generally, the panel should utilize Council procedures limiting the time allowed for public testimony and questions by AP members. Should the meeting run behind schedule, the AP Chair will consult with the Deputy Director, Executive Director, or Council Chair to determine priority issues for the AP to address in the time remaining.

The AP Chair or designee will be responsible for reporting the AP's recommendations (AP minutes) to the Council. The AP minutes shall include a record of passed motions and close call votes (even if the motion failed). This report shall include the results of votes taken, including minority reports which are signed by at least 3 of the members voting in the minority at the time of the vote and submitted in writing. All minority

reports consistent with the above standard shall be included in the written AP report to the Council, but not read into the record during the oral report to the Council.

The Executive Director of the Council shall, upon request of the Chair of the AP, provide such staff and other support as the Council considers necessary for AP activities, within budgetary limitations.

2.3.3 Plan Teams

The Council appoints plan teams for each of the major fishery management plans (FMPs). Members of each team are selected from those agencies and organizations having a role in the research and/or management of fisheries. The team should be small enough to work efficiently and effectively but sufficiently large to provide the diverse experience and knowledge needed to cover all aspects of a particular fishery. At a minimum, teams shall be composed of one member from agencies having responsibility for management of the fishery resources under the jurisdiction of the Council. Nominations of these individuals are at the discretion of the agencies. Other individuals may be nominated by members of the Plan Team, Council, SSC or AP. Appointments to the team will be made by the Council with recommendations from the SSC.

Members of the Plan Teams serve without compensation. Non-federal employees may be paid their actual expenses for travel and per diem incurred in the performance of their duties during the days in which the Plan Team is in session. The Plan Team chair, vice-chair, or Plan Team member designated to report to the Council may be paid expenses when necessary and approved by the Executive Director.

The Plan Teams shall review stock assessment information and assist in the preparation of the annual Stock Assessment and Fishery Evaluation (SAFE) documents including formulation of recommendations on annual Acceptable Biological Catch (ABC) levels for groundfish, crab, and scallop species under jurisdiction of the Council. The Teams may also prepare and/or review plans, amendments and supporting analytical documents for the Council, SSC and AP; aggregate and evaluate public/industry proposals and comments; summarize and evaluate data related to the biological, economic and social conditions of the fishery; conduct and evaluate analyses pertaining to management of the fisheries; evaluate the effectiveness of management measures in achieving the plan's objectives; and recommend when and how management measures need to be changed.

These and other provisions concerning the teams are included in each Plan Team's Terms of Reference, which are approved by the Council. The current Terms of Reference for the Groundfish, Crab, and Scallop Plan Teams are attached as Appendix 1, Appendix 2, and Appendix 3, respectively.

2.3.4 Council Committees

The Council may appoint standing and ad hoc committees from among the voting and non-voting members as it deems necessary for the conduct of Council business. The Council Chair may also appoint standing or ad hoc Committees that include industry representatives or other participants to address specific management issues or programs. Compensation and travel expenses for non-Council participants on such Committees will not be provided by the Council.

Notices of Council committee meetings shall comply with the notice requirements specified in Section 3.1. Public comment at committee meetings will be at the discretion of the Council Chair or Executive Director.

3.0 Council Meetings and Hearings

The Council will meet at the call of the Chair or upon request of a majority of the voting members, subject to the general policy outlined in Section 3.5. In fulfilling the Council's responsibilities and functions, the Council

members may meet in plenary session, in working groups, or individually to hear statements in order to clarify issues, gather information, or make decisions regarding material before them. Emergency meetings shall be held at the call of the Chair or equivalent presiding officer. The following guidelines apply with respect to the conduct of business at meetings and hearings of the Council and its SSC and AP:

3.1 Agenda and Notice

The agenda for each Council meeting is drafted by the Executive Director in consultation with the Council Chair. All Council members will have an opportunity to review and comment on a draft agenda before it is released to the public.

Timely notice of each regular meeting, hearing, and each emergency meeting, including the time, place, and agenda of the meeting, shall be provided by any means that will result in wide publicity in the major fishing ports of the region (and in other major fishing ports having a direct interest in the affected fishery) except that e-mail notification and website postings alone are not sufficient. Timely notice of each regular meeting shall also be published in the Federal Register. The published agenda of the meeting may not be modified to include additional matters for Council action without public notice or such notice must be given at least 14 days prior to the meeting date, unless such modification is to address an emergency action under section 305(c) of the Act, in which case public notice shall be given immediately.

Drafts of all regular public meeting notices must be transmitted to the NMFS Headquarters Office (Federal Register) at least 23 calendar days before the first day of the regular meeting. Councils must ensure that all public meetings are accessible to persons with disabilities, and that the public can make timely requests for language interpreters or other auxiliary aids at public meetings. Drafts of emergency public notices must be transmitted to the NMFS Washington Office; recommended at least 5 working days prior to the first day of the emergency meeting. Although notices of, and agendas for, emergency meetings are not required to be published in the Federal Register, notices of emergency meetings must be promptly announced through the appropriate news media. Requests for disability-related accommodations should be processed in accordance with Department Administrative Order DA 215-10.

3.2 Conduct of Meetings

Each regular meeting and each emergency meeting shall be open to the public. Interested persons shall be permitted to present oral or written statements regarding the matters on the agenda at meetings, within reasonable limits established by the Chair. Current Council policy on oral testimony limits individuals to three minutes, and organizations to six minutes, per agenda item. All written information submitted to a Council by an interested person shall include a statement of the source and date of such information. Any oral or written statement shall include a brief description of the background and interests of the person in the subject of the oral or written statement. During Council meetings the area adjacent to and behind the Council seating area will be restricted to only Council members and Council/agency staff. The exchange of electronic communication (using laptops, cell phones, or other devices) in the meeting room by Council members is prohibited when the Council is in session.

(1) A majority of the voting members of any Council constitute a quorum for Council meetings, but one or more such members designated by the Council may hold hearings. Decisions of any Council are by majority vote of the voting members present and voting (except for a vote to propose removal of a Council member, see 50 CFR 600.230 and except where Roberts Rule of Order require a 2/3 majority vote). Voting by proxy is permitted only pursuant to 50 CFR 600.205 (b). An abstention does not affect the unanimity of a vote. At the request of any voting member of a Council, the Council shall hold a roll call vote on any matter before the Council. The official minutes and other appropriate records of any Council meeting shall identify all roll call

votes held, the name of each voting member present during each roll call vote, and how each member voted on each roll call vote.

(2) A roll call vote is required for Council approval or amendment of a fishery management plan (including any proposed regulations), a Council finding that an emergency exists involving any fishery, or Council comments to the Secretary on fishery management plans developed by the Secretary. A final vote may not be taken until the motion before the Council is recorded in written form visible to each Council member present and the public. The written motion, as voted on, must be preserved as part of the record or minutes of the meeting. For a vote on a Council finding that an emergency exists in a fishery, the exact number of votes (for, against, and abstaining) must be preserved as part of the record of the meeting.

(3) Voting members of the Council who disagree with the majority on any issue to be submitted to the Secretary, including principal state officials raising federalism issues, may submit a written statement of their reasons for dissent. If any Council member elects to file such a statement, it should be submitted to the Secretary at the same time the majority report is submitted.

(4) Parliamentary procedure will be used in the conduct of the meetings. Agreement among Council members can be reached by consensus and non-voting members are expected to take part in all discussions and indicate their opinions on all specific issues. Those matters pertaining to the approval or disapproval of a fishery management plan or amendment, including proposed regulations, or comments for the Secretary on foreign fishing applications, or Secretarially-prepared management plans, require a vote.

(5) At any time when a Council determines it appropriate to consider new information from a state or federal agency or from a Council advisory body, the Council shall provide opportunity for public comment before the Council takes final action on conservation and management measures.

(6) The Council shall adhere to "Mace's Rules" to improve the efficiency of Council meetings. During agency reports at the beginning of each meeting, each Council member shall be limited to two questions per report. During public testimony for a given issue, each Council member will be limited to two questions per testifier. The Chair is granted the authority as necessary to improve the quality of Council debate and enhance the overall efficiency of Council meetings in general.

3.3 Record

Detailed minutes of each meeting of the Council, except for any closed session, shall be kept and shall contain a record of the persons present, a complete and accurate description of matters discussed and conclusions reached, and copies of all statements filed. The Council Chair shall verify the accuracy of the minutes of each such meeting and submit a copy thereof to the Secretary. The minutes shall be made available to any court of competent jurisdiction.

Subject to the confidentiality procedures established by the Council on January 28, 1986, and the guidelines prescribed by the Secretary pursuant to Section 402(b) of the Act, the administrative record and minutes of each meeting and records or other documents which were made available to or prepared for or by the Council, committee, or panel incident to the meeting, shall be available for public inspection and copying at a single location in the offices of the Council, or the Secretary, as appropriate.

3.4 Closed Meetings

If any meeting or portion is closed, the Council shall provide notice by any means that will result in wide publicity in the major fishing ports of the region (and in other major fishing ports having a direct interest in the affected fishery), except that e-mail notification and website posting alone are not sufficient, including in that

notification the time and place of the meeting. Notification is not required regarding any brief closure of a portion of a meeting in order to discuss employment or other internal administrative matters.

(1) A Council, SSC, or AP shall close any meeting, or portion thereof, that concerns information bearing on a national security classification.

(2) A Council, SSC, or AP may close any meeting, or portion thereof, that concerns matters or information pertaining to national security, employment matters, or briefings on litigation in which the Council is interested.

(3) A Council, SSC, or AP may close any meeting, or portion thereof, that concerns internal administrative matters other than employment. Examples of other internal administrative matters include candidates for appointment to AP, SSC, and other subsidiary bodies and public decorum or medical conditions of members of a Council or its subsidiary bodies. In deciding whether to close a portion of a meeting to discuss internal administrative matters, a Council or subsidiary body should consider not only the privacy interests of individuals whose conduct or qualifications may be discussed, but also the interest of the public in being informed of Council operations and actions.

(4) Without the notice required above, a Council, SSC, or AP may briefly close a portion of a meeting to discuss employment or other internal administrative matters. The closed portion of a meeting that is closed without notice may not exceed 2 hours. Before closing a meeting or portion thereof, a Council or subsidiary body should consult with the NOAA General Counsel Office to ensure that the matters to be discussed fall within the exceptions to the requirement to hold public meetings described above. Actions that affect the public, although based on discussions in closed meetings, must be taken in public. For example, appointments to an AP must be made in the public part of the meeting; however, a decision to take disciplinary action against a Council employee need not be announced to the public.

3.5 Frequency and Duration

The Council normally meets five times each year. Each meeting generally lasts from six to seven days and begins on Wednesday of the meeting week. The Council's SSC and AP generally meet concurrently with the Council, starting two days prior to the Council. The specific timing of each meeting shall be coordinated by the Executive Director in consultation with the Chair.

3.6 Location

The Council shall meet at appropriate times and places in any of the constituent states of the Council. Council meetings typically will be held in Alaska, with the exception that one meeting each year will be held in the constituent state of Washington or Oregon, at a ratio of two meetings in Washington for every one in Oregon. Specific meeting locations within each state will be coordinated by the Executive Director in consultation with the Chair.

3.7 Council Member Compensation

Those voting members of the Council who are not employed by the Federal Government or any state or local government shall receive compensation at the daily rate for GS-15 (Step 7) of the General Schedule. Such compensation shall be limited to attendance at formal meetings of the Council (actual meeting days), meetings of standing or ad hoc committees on which the Council member is a designated member, or to the Chair, Vice-Chair, or designee while officially representing the Council or conducting official business of the Council outside of such meetings. Such compensation may be paid on a full day's basis whether in excess of eight

hours a day or less than eight hours a day. "Homework" time in preparation for any meeting, or attendance of any meeting other than specified above, is not compensable nor is travel time to or from such meetings.

The Council Chair must submit to the Regional Office annually a report of Council member compensation authorized. This report shall identify, for each member, amount paid, dates, and location and purpose of meetings attended.

3.8 Council Member Travel

Council members travel reimbursement shall be limited to attendance at formal meetings of the Council, Council member training, meetings of standing or ad hoc committees on which the Council member is a designated member, or to the Chair, Vice-Chair, or designee while officially representing the Council or conducting official business of the Council outside of such meetings. Council members shall follow the same general travel rules set forth for Council employees. In extenuating circumstances, which must necessarily be related to their fishing or processing activities and with advance notice, the Council Chair may authorize travel reimbursement to and from locales other than a Council member's normal home location.

3.9 Council Member Training

Council members shall, within one year after the date on which they were appointed, complete a training course that meets the requirements of the Act. Chair.

3.10 Principles for Stakeholder Involvement

Pursuant to NMFS Policy Directive 30-129 regarding stakeholder participation, the following seven core principles on stakeholder involvement will be used to guide communication strategies and activities. These core principles are:

1. Use an open and clearly defined decision-making process.
2. Make key information readily available and understandable.
3. Actively conduct outreach and solicit stakeholder input.
4. Involve stakeholders early and throughout the decision-making process.
5. Foster responsive, interactive communication between stakeholders and decision-makers.
6. Use formal and informal participation methods.
7. Include all stakeholder interests.

4.0 Employment Practices

This section describes the major employment practices for Council employees. Additional details are explained in the Council's personnel rules. Copies of these rules are given to each new employee.

4.1 Staffing

The Council staff includes an Executive Director, a Deputy Director, and other full and part-time employees as determined necessary to the performance of Council functions consistent within budgetary limitations. The Executive Director is responsible to the Council, and the staff is responsible to the Executive Director.

4.2 Experts and Consultants

As long as funding is available in its budget, the Council may contract with experts and consultants as needed to provide technical assistance not available from NOAA. This includes legal assistance, though a Council must notify the NOAA Office of General Counsel before seeking outside legal advice, which may be for technical assistance not available from NOAA. If the Council is seeking legal services in connection with an employment practices question, the Council must first notify the Department of Commerce's Office of the Assistant General Counsel for Administration, Employment and Labor Law Division. A Council may not contract for the provision of legal services on a continuing basis.

4.3 Detail of Government Employees

The Council may request the detail of other government employees to assist the Council in the performance of its functions.

4.4 Personnel Actions

All staff employees serve at the pleasure of the Council. The Executive Director may be dismissed by a two-thirds (2/3) majority vote of the voting Council members (i.e., 8 of the 11 voting members), and other staff employees may be dismissed by the Executive Director acting for the Council. Dismissals may be made for misconduct, unsatisfactory performance, and/or lack of funds, with reasonable notice to the employee.

No employee of the Council may be deprived of employment, position, work, compensation, or benefit provided for or made possible by the Act on account of any political activity or lack of such activity in support of or in opposition to any candidate or political party in any national, state, county, or municipal election, or on account of his or her political affiliation.

4.5 Salary and Wages

In setting rates of pay for Council staff, the principle of equal pay for equal work is followed. The annual pay rates for Council staff positions are consistent with the pay rates established for General Schedule federal employees as set forth in 5 USC 5332, and/or the Alternative Personnel Management System for the U.S. Department of Commerce (62 FR 67434), including cost of living (COLA) differentials and the 6% supervisory pay allowance. The NPFMC is using the discretion allowed for in the regulations to adjust pay rates and pay increases based on COLA differentials in Alaska, consistent with the federal payscale, including adjustments necessary to achieve equivalency with federal counterparts. COLA adjustments in pay rates and pay increases are being provided for staff members. No pay adjustment based on geographic location exceeds the equivalent COLA and locality pay adjustments available to federal employees in the same geographic area. Salary increases funded in lieu of life and medical/dental policies are not permitted.

Employees will be entitled to promotions and associated pay raises solely on the basis of merit and performance. The Executive Director, acting for the Council, shall conduct performance reviews at least biennially with each Council employee and will approve promotions and raises based on the employee's performance, length of service, or special accomplishments. Pay raises and performance evaluations for the Executive Director will be accomplished through a review process, at least biennially, involving the Council's Executive Committee. Career development, including formal training, will be supported by the Council, subject to budgetary limitations, when directly beneficial to both the employee and the Council.

A cash award may be provided to employees as an exceptional performance award in recognition of one or more particularly meritorious accomplishments, at the discretion of the Council Chair (for awards to the

Executive Director) and the Executive Director (for awards to other staff). The total amount of an award will not exceed those allowable under current U.S. Department of Commerce guidelines.

In conducting official Council business, Council members and staff generally have the same protection from individual tort liability as federal employees on official actions, and are protected by the federal workmen's compensation statute, by the minimum wage/maximum hour provisions of the Fair Labor Standards Act (FLSA), and by the rights of access and confidentiality provisions of the Privacy Act (PA). Council staff are eligible also for unemployment compensation in the same manner as federal employees. Overtime payments shall be made in accordance with the provisions of the Fair Labor Standards Act (FLSA) 29 USC 201 et. seq.

4.6 Recruitment

Council staff positions must be filled solely on the basis of merit, fitness for duty, competence, and qualifications. The Council is an Equal Employment Opportunity Employer. All employment actions will be free from discrimination based on race, religion, color, national origin, sex, age, disability, sexual orientation, status as a parent, and reprisal.

Except for complaints alleging sexual orientation and a status as a parent, complaints by employees alleging that they may have been discriminated against on the bases listed above, should be processed in accordance with 29 CFR 1614. Employees must contact and EEO Counselor at NOAA's Office of Civil Rights within 45 days of the date of the alleged discrimination.[1] Employees alleging discrimination on the basis of sexual orientation will have their complaints processed in accordance with DAO 215-11. Employees must contact an EEO Counselor at NOAA's Office of Civil Rights within 45 days of the date of the alleged discrimination.

4.7 General Harassment Policy

The Council has a zero-tolerance policy for harassment on the basis of race, religion, color national origin, sex, age, sexual orientation, disability and reprisal. Any employee who believes he or she has been harassed should report the harassment to a supervisor or manager. The supervisor or manager should then follow the steps set forth in Department Administrative Order, DAO 202-955. Any complaints of harassment on the basis of sexual orientation should be handled in accordance with DAO 215-11. The provisions of these DAOs are entirely separate from EEO complaint process, and must be followed whether or not an employee has files an EEO complaint. The Council's Harassment Policy extends beyond staff and includes members of the Council with regard to interactions with staff, and includes conduct of Council members, staff members, and public during the course of official Council meetings, advisory body meetings, or committee meetings.

4.8 Leave

Employees of the Council shall be granted paid leave for holidays, vacations or exigencies, sickness, and civic duties (jury, military reserve obligations) as determined by the Council, and pregnancy, parental, and family leave consistent with the Family and Medical Leave Act of 1993. The accrual and use of leave is explained in the Council's personnel rules. Copies of these rules are given to each new employee.

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[1] According to a Legal Opinion dated March 14, 1995, from the U.S. Department of Justice, Office of Legal Counsel, the Fisheries Management Council "..... are covered by the anti-discrimination provisions of Title VII of the Civil Rights Act of 1964 insofar as they apply to employment in the federal government.....". As such, their discrimination complaints are processed in accordance with 29 C.F.R. ' 1614.

4.8.1 Annual Leave

Full-time Council employees shall accrue annual leave at rates not to exceed those for federal employees. Part-time employees accrue leave at the same rate, per hours worked. If the Council so desires, it may credit prior federal, state or local government service for the purpose of determining leave accrual of individual employees. Application of such a policy must be uniform and public.

Employees may carry over up to 240 hours (30 days) unused annual leave from one year to the next. Amounts remaining above 240 hours will be forfeited. Under certain conditions, forfeited annual leave may be restored if it was properly scheduled for use and circumstances beyond the employee's control caused the forfeiture. Approval for this restoration must be obtained from the Council Executive Director or Council Chair, who will refer to the NOAA Personnel Regulations and other source documents for guidance. Lump sum reimbursements not to exceed 240 hours carryover plus current year earnings of unused leave are authorized upon employee separation. Each Council may pay for unused annual leave upon separation, retirement, or death of an employee.

4.8.2 Sick Leave

Full-time Council employees shall accrue sick leave at the rate of two hours per week (13 days per year). Part-time employees may accrue at a percentage of the hours worked compared to 40 hours. Unused sick leave credit may be accumulated without limit. Lump sum payments to the employee upon separation are not authorized. However, distributions of accumulated funds for unused sick leave may be made to the employee upon his or her retirement (defined by PERs retirement rules), or to his or her estate upon his or her death, for up to 100 days of unused sick leave, at the employees current salary rate, subject to budgetary limitations.

One account shall be maintained to pay for unused sick or annual leave as authorized, and will be funded from the Council's annual operating allowances. Funds may be deposited into this account at the end of the budget period if unobligated balances remain. Interest earned on this account will be maintained in the account, along with the principal, for the purpose of payment of unused annual and sick leave only. This account, including interest, may be carried over from year to year. Budgeting for accrued leave will be identified in the ``Other'' object class categories section of the SF-424A.

In meritorious cases, the Council may advance up to one year's earnings of sick or annual leave when it is reasonably expected that the advanced leave will be repaid by the employee. This must be approved by the Executive Director (designation must be in writing).

4.9 Employee Benefits

The Council shall provide its employees and their legal dependents health insurance coverage and limited life insurance and accidental death and dismemberment coverage through the State of Alaska (Aetna) program. Retirement benefits are realized through Council participation in, and mandatory employee contributions to, the State of Alaska Public Employee System (PERS). Employee participation in a 403(b) plan is optional and at the employees expense. Moving expenses for new employees are authorized, up to limits specified in federal guidelines, subject to budgetary limitations.

5.0 Travel Rules

This section provides rules in addition to the travel rules specified previously for Council, AP, SSC and Plan Team members.

5.1 Limits and Reimbursement

Council members, employees, and members of the AP, SSC and Plan Teams who are not federal employees will be reimbursed for actual travel expenses while on official Council business, including transportation, room, meals, and incidental travel expenses (such as taxi fares, parking, and Council business telephone calls) within reasonable limits, but generally should not exceed the limits established by the federal government. Domestic invitational travel for non-Council personnel may be approved by the Council Chair or Executive Director. Payment for travel by NOAA personnel is not authorized.

Non-federal members of the Council and members of advisory groups and Council staff will be reimbursed for actual expenses incurred in the performance of Council duties. They are not bound by the separate per diem limits for meals and lodging as set forth in the GSA Rules. They are subject, however, to the total reimbursement limits established by the Federal Government for actual expenses, and they must itemize their actual expenses up to the specified limit each day. Lodging and airline receipts are required. The rates are included in the GSA Rules. Federal employees serving in the above capacities are subject to the reimbursement rules of their agencies.

Coach air transportation must be utilized when available, and economy fares are encouraged. Purchased travel via first class air may be authorized in extenuating circumstances subject to pre-approval by the Council Chair or Executive Director. Privately owned vehicles (POVs) may be authorized when other modes of transportation are either unavailable or inconvenient. When a POV is authorized for the convenience of the traveler, the reimbursement costs must not exceed the costs of coach air fare. Accommodations equivalent to other-than-first-class should be utilized in the unlikely event that water vessel transportation is required. When substantial savings can be realized by utilizing rail travel, this mode of transportation should be considered when available and adequate.

5.2 Foreign Travel

(1) Foreign travel is authorized as described within the NOAA grant, when approved by the Executive Director, as necessary to conduct Council business.

(2) The Council Chair or his/her authorized representative may approve routine across-the-border travel to Canada for Council members and employees within specified federal rates.

(3) Foreign invitational travel for non-Council personnel must be approved as described in paragraph (1) of this section. The per diem limits or actual expense requirements described above also are applicable to non-Council personnel traveling at Council expense. Payment for federal personnel from Council funds is not authorized.

6.0 Standards of Conduct

The Council, SSC, and staff shall maintain high standards of ethical conduct. These standards include the following principles:

A. No employee of the Council, SSC member, or Council member, shall use his or her official authority to act in the name of the Council for the purpose of influencing the result of an election to or a nomination for any public elective office.

B. No SSC member, Council member, or employee shall pay, or offer, or promise, or solicit, or receive from any person, firm, or corporation, either as a political contribution or a personal emolument any money, or anything of value in consideration of either support, or the use of influence, or the promise

of support, or influence in obtaining a Council decision or for any person, any appointive office, place or employment under the Council.

C. No employee of the Council, SSC member, or member of the Plan Teams shall have a direct or indirect financial interest that conflicts with the fair and impartial conduct of his or her Council duties. Council members with a direct or indirect financial interest shall ensure that it does not conflict with the fair and impartial conduct of his or her Council duties.

D. The Act and federal regulations at 50 CFR 600.235 require that Council nominees, voting members appointed to the Council by the Secretary, and Executive Directors disclose any financial interest of the reporting individual in any harvesting, processing, or marketing activity that is being, or will be, undertaken within any fishery under the jurisdiction of the individual's Council or of any such financial interest of the reporting individual's spouse, minor child, partner, or any organization (other than the Council) in which that individual is serving as an officer, director, trustee, partner, or employee. The information required to be reported must be disclosed on NOAA Form 88-195, "Statement of Financial Interests for Use by Voting Members, Nominees and Executive Directors of Regional Fishery Management Councils," or such other form as the Secretary, or designee, may prescribe. The report must be filed by nominees for Secretarial appointment before the date of appointment as prescribed by the Secretary. Voting members appointed by the Secretary and Executive Directors must file the report with the Council office before taking office. Individuals must update the form at any time a reportable financial interest is acquired or the financial interests are otherwise substantially changed.

E. All Council members appointed under Section 302(b)(2) must strictly adhere to Section 302(j)(7) regarding disclosure of financial interest and recusal, and Secretarial regulations at 50 CFR 600 regarding rules of conduct and financial disclosure, during any vote taken by the Council. Financial interest disclosures shall be made on forms, which shall be kept on file by the Council and made available on the Internet and for public inspection at the Council office during reasonable hours.

7.0 Financial Management

Each Council's grant activities are governed by OMB Circular A-110 (Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and other Non-Profit Organizations), OMB Circular A-122 (Cost Principles for Non-Profit Organizations), 15 CFR Part 29b (Audit Requirements for Institutions of Higher Education and other Nonprofit Organizations) which provide uniform administrative requirements applicable to the Council, including standards for financial management, financial reporting, property management, and procurement. The Council will operate in full compliance with these standards and the terms and conditions of the cooperative agreement. (See 5 CFR 1310.3 for availability of OMB Circulars.)

The Council is exempt from federal income tax under section 501(a) of the Internal Revenue Code as an organization described in section 501(c)(3).[2] As such, the Council is liable for taxes under the Federal Insurance Contributions Act (social security taxes), but not liable for the tax imposed under the Federal Unemployment Tax Act.

7.1 Cooperative Agreements and Contracts

The Council receives funds through cooperative agreements for two basic types of expenditures: administrative (operations) funds to cover general operating expenses such as salaries, office space, utilities,

2 This determination was made by the Department of Treasury, IRS, in a letter dated June 4, 2002.

travel, state liaison activities, meeting expenses, etc., and programmatic funds primarily designed to fund contracts generated by the Council for development and amendment of FMPs or FMP-oriented information. Councils may not independently enter into agreements, including grants, contracts, or cooperative agreements, whereby they will receive funds for services rendered. All such agreements must be approved and entered into by NOAA on behalf of the Councils. Councils are not authorized to accept gifts or contributions directly. All such donations must be directed to the NMFS Regional Administrator in accordance with applicable Department of Commerce regulations.

7.1.1 Administrative

The funding for the administrative and technical support of Council operations is included in the budget of the Department of Commerce and, through the Department, in the budgets of NOAA and NMFS. The Council applies for and receives such funding through the appropriate processes of the NOAA Grants Management Division.

A Cash Receipts and Disbursement Journal with a monthly Summary of Accounts is required as a minimum bookkeeping system for the administrative budget. Each cash disbursement must be approved by the Council Executive Director or Deputy Director. All checks require signatures from two of the following people: Council Executive Director, Deputy Director, or Administrative Officer.

7.1.2 Programmatic

The Council may enter into cooperative agreements with federal agencies, ftate, and private institutions on matters of mutual interest which further the objectives of the Act.

7.2 Procurement and Contracts

Negotiated and advertised contracts will generally follow the specifications normally characteristic of contracts with public entities (e.g., public announcement, emphasis on competition, change orders, etc.) and will be consistent with the terms of the cooperative agreement.

All procurements must comply with the terms and conditions of the award and OMB Circulars A-110 and A-122. The purchase of all equipment, not previously approved in the award, costing in excess of $5,000 per unit and having a useful life of more than 1 year, requires the approval of the Regional Program Officer and the Grants Officer. Such approval will be made only after a cost-benefit analysis (system life cost, lease vs. purchase, compatibility, etc.) by the Council demonstrates the economy of the proposed action.

Commodities and services will be procured by means of a document-oriented system, with a receipt, check, or purchase order type document maintained on all transactions. Equipment and supplies available in the General Services Administration will usually be given primary consideration, except where cost-effectiveness and efficiency dictate otherwise. A petty cash fund for over-the-counter purchases will be maintained as necessary in the Council staff office.

7.3 Property Management

An accountability system of all non-expendable items of personal property, with a current market value of greater than $1,000, will be maintained by means of an inventory system. An annual inventory report will be submitted to the NOAA Grants Officer. Theft will be reported promptly to the appropriate authorities. All non-expendable items over $1,000 in current market value, will be inventoried. Disposal of surplus will be

performed in accordance with grant provisions. Any item no longer functional may be discarded in any manner deemed appropriate by the Executive Director or Administrative Officer.

7.4 Real Property

The leasing, renting, and acquisition of real property and space will be effected in a manner consistent with customary practices related to contracts with public entities. Real property files will be maintained on all transactions, including litigation, connected therewith.

7.5 Accounting System

(1) The finance and budget control system will be a direct responsibility of the Administrative Officer, who will maintain full cognizance of, and compliance with, all Department of Commerce requirements, pursuant to the Act, Treasury Department (IRS) regulations as well as any applicable local requirements (state, municipal, etc.).

(2) Financial control will be effected by means of a basic document-oriented accrual accounting system, which will include provisions for at least the following: direct labor (salary); indirect labor (employer contributions for FICA, life and health insurance, retirement, and unemployment taxes), travel expenses (transportation and subsistence), transportation of things, rent and utilities, taxes (non-employment), printing, communications, supplies, equipment, contracts, and any appropriate contra-accounts (contract accruals, etc.).

(3) A general ledger, supported by appropriate journals, will be maintained on all obligations and expenses, including appropriate accruals, and will be used to prepare periodic reports for review by the Executive Director, the Council, or Department of Commerce representatives. As a minimum, a complete financial status report should be completed on a monthly basis. The financial management system will be coordinated with the budget management system so that current and projected fund usage can be determined at any time.

(4) A separate payroll register, indicating all applicable expenses and accruals, will be maintained on each member of the Council and the Council staff.

7.6 Audits

Audits will be performed biennually (once every 2 years) by DOC Office of Inspector General or an independent public accountant. NOAA personnel will be invited as appropriate to participate in the audit exit conference.

7.7 Financial Reporting

Reports will be submitted as required by OMB Circular A-110 to summarize total expenditures and federal funds unexpended, and the status of the federal cash received. All financial reports will be kept until audited or approved for disposal by the appropriate Department of Commerce representative.

8.0 Recordkeeping

8.1 Administrative Records for FMPs

(1) The Council and NMFS Headquarters, Regions and Centers collectively are responsible for maintaining records pertaining to the development of FMPs and amendments. In the event of litigation, compilation of an administrative record for a court case will be under the direction of the NOAA General Counsel.

(2) Categories of documents which generally constitute an administrative record include the following:

(a) Council meeting agendas;
(b) Minutes of Council meetings;
(c) Plan Team reports, if any;
(d) SSC reports;
(e) AP reports;
(f) Hearing reports;
(g) Council reports/recommendations;
(h) Correspondence relating to the FMP;
(I) Scoping comments;
(j) Work plan, if any;
(k) Discussion papers, if any;
(l) NEPA documents;
(m) Regulatory analyses;
(n) PRA justification;
(o) Proposed regulations;
(p) Final regulations;
(q) Emergency regulations; and
(r) Notices of meetings (Council, SSC, AP, Team).

8.2 Disposition of Records

(1) The goal of an effective disposition program is annually to destroy at least enough unneeded records to equal the volume of records created, while preserving records having long-term or enduring value because of administrative, legal, scientific, or historical importance.

(2) The Council must consult with NOAA before destroying Council records. Financial records (including time and attendance records) are handled according to the stipulations of OMB Circular A-110. The Council must send records associated with FMPs to the appropriate Region for disposition.

(3) All records and documents created or received by Council employees while in active duty status belong to the Federal Government. When employees leave the Council, they cannot take original or file copies of records with them; to do so violates federal law.

8.3 Permanent Records

The designation of a file as "permanent" means that the records are appropriate for offer to the National Archives when 20 years old, unless otherwise specified. Destruction of permanent records is not authorized. The following are examples of permanent files:

(1) EIS files: Documents relating to Environmental Impact Statements (EIS) or environmental assessments. Cut-off at end of calendar year when created. Permanent retention; no approved disposition at this time.

(2) Annual report files: Input for the DOC Annual Reports and related correspondence. Cut-off at end of calendar year when created; permanent.

(3) Meeting files: Including agendas, minutes, reports, studies and related correspondence. Cut-off at end of calendar year; permanent.

8.4 Privacy Act Records

The Council will maintain in its office, under appropriate safeguards in accordance with the Privacy Act (PA), personnel files on employees, experts and consultants under contract, and advisory group members. Maintenance, protection, handling of requests for information, and disclosure and disposition of PA records will be accomplished as provided for in the Secretarial guidelines and regulations.

8.5 Freedom of Information Act (FOIA)

FOIA requests received by a Council should be coordinated promptly with the appropriate NMFS Regional Office. The Region will forward the request to the NMFS FOIA Official to secure a FOIA number and log into the FOIA system. The Council does not recover costs - payments collected under the FOIA are transferred to the U.S. Treasury. All responsive documents must be reviewed for disclosure on a page-by-page basis, and that originals must be retained in the originating office, while copies must be maintained in accordance with DOC policy. The Region will also obtain clearance from the NOAA General Counsel's Office concerning initial determination for denial of requested information. FOIA requests will be controlled and documented in the Region. The requests should be forwarded to the NMFS FOIA Officer who will prepare the Form CD-244, "FOIA Request and [[Page 57888]] Action Record'," with the official FOIA number and due date. In the event the Region determines that the requested information is exempt from disclosure, in full or in part, under the FOIA, the denial letter prepared for the Assistant Administrator's signature, along with the "Foreseeable Harm" Memo and list of documents to be withheld, must be cleared through the NMFS FOIA Officer. Upon completion, a copy of the signed CD-244 and cover letter transmitting the information should be provided to the NMFS FOIA Officer and the NOAA FOIA Officer.

8.6 Confidentiality of Statistics

In accordance with Section 302(i)(4) of the Act, as described below, the Council has established policies and procedures applicable to ensure that statistics submitted to the Council by federal or state authorities or voluntarily by private persons remain confidential. All policies and procedures concerning the confidentiality of such statistics must be consistent with relevant federal or state law.

Confidential data will not be disclosed except to authorized users (Council staff or authorized contractors) in accordance with the applicable federal or state rules and policies governing use of the data. All users having access to confidential data shall be informed that the data are confidential and be required to sign a statement of non-disclosure agreeing to all applicable rules governing their handling of the data (including the use, disclosure, maintenance, and return of the data), which shall be kept on file at the Council office. When there is a potential for, or possible appearance of, conflict of interest, access will not be permitted.

To ensure security of confidential data, Council staff employees are required to comply with NOAA Management Directives regarding the policies and procedures governing the use of NOAA computing resources. Briefly, individuals must be accountable for their assigned IDs, passwords, and equipment (e.g., laptops and accessories). Employees should use extra caution when holding confidential data on devices that are transported outside of the Council office. Employees are required to immediately notify the Deputy Director or Executive Director any incidents including unauthorized use of computers, lost, stolen, or missing

hardware such as laptops or removable memory devices.

Appendix 1. Terms of Reference for the Groundfish Plan Teams.

Plan Teams for the Groundfish Fisheries
of the Bering Sea/Aleutian Islands and Gulf of Alaska
TERMS OF REFERENCE
(November 2003)

1. **Establishment**. The North Pacific Fishery Management Council (Council) shall establish Plan Teams for the groundfish fisheries of the Bering Sea/Aleutian Islands (BS/AI) and Gulf of Alaska (GOA). The Plan Teams will provide the Council with advice in the areas of regulatory management, natural and social science, mathematics, and statistics as they relate to the groundfish fisheries of the BS/AI and GOA.

2. **Membership**. Plan Team members will be appointed from government agencies and academic institutions having expertise relating to the groundfish fisheries of the BS/AI and GOA. Normally, each Plan Team will include at least one member from the Council staff, the regional office of the National Marine Fisheries Service (NMFS), NMFS' Alaska Fishery Science Center, the Alaska Department of Fish & Game, the Washington Department of Fisheries, the International Pacific Halibut Commission, the University of Alaska, the University of Washington, and other institutions and universities. With the consent of the sponsoring agency or institution, nominations may be made by the Council, the Scientific and Statistical Committee (SSC), the Advisory Panel (AP), or the Plan Teams themselves. All nominations will be subject to approval by the SSC, with the Council retaining final appointment authority. Appointments should reflect the Plan Teams' responsibility to provide advice in the areas of regulatory management, natural and social science, mathematics, and statistics.

3. **Organization**. Each Plan Team will be directed by a chairperson or co-chairs, and may divide some of its responsibilities among work groups organized according to subject matter. A work group may include members from more than one Plan Team. Each work group will be directed by a work group leader.

   (a) **Rules of order**. In general, rules of order will be informal. Plan Team decisions will be reached by consensus, whenever possible. If a decision is required and consensus cannot be reached, the opinion of the majority will prevail. In representing either Plan Team publicly, the spokesperson will take care to relate Plan Team opinions accurately, noting points of concern where consensus cannot be reached.

   (b) **Meetings**. Plan Team meetings will be held prior to Council's September and December meetings. The Plan Team chairpersons may call other meetings as necessary. The two Plan Teams may meet either separately or jointly. A draft agenda will be prepared in advance of each meeting by the Council staff in consultation with the respective chairperson or chairpersons, and may be revised by the Plan Team(s) during the meeting. Each agenda will include an opportunity for comments from the general public. Minutes of each meeting will be prepared by the Council staff, distributed to Plan Team members, and revised as necessary at or before the subsequent Plan Team meeting.

   (c) **Selection of officers**. Officers (Plan Team chairpersons and work group leaders) will be selected at the meeting preceding the September Council meeting or as vacancies arise. The Plan Team chairpersons will be selected for two-year terms. Work group leaders will be selected for one-year terms. There will be no limit on the number of consecutive terms that officers may serve.

4. **Functions**. The Plan Teams' primary function is to provide the Council with the best available scientific information, including scientifically based recommendations regarding appropriate measures for the conservation and management of the BS/AI and GOA groundfish fisheries.

   (a) **SAFE report**. The Plan Teams compile SAFE reports for the BS/AI and GOA groundfish fisheries on

an annual basis. The SAFE reports provide the Council with a summary of the most recent biological condition of the groundfish stocks and the social and economic condition of the fishing and processing industries. The SAFE reports summarize the best available scientific information concerning the past, present, and possible future condition of the groundfish stocks and fisheries, along with ecosystem considerations/concerns. This includes recommendation of acceptable biological catch and, where appropriate, total allowable catch levels. All recommendations must be designed to prevent overfishing while achieving optimum yield (National Standard 1). All recommendations must also be scientifically based (National Standard 2), drawing upon the Plan Teams' expertise in the areas of regulatory management, natural and social science, mathematics, and statistics. Finally, uncertainty must be taken in account wherever possible (National Standard 6).

(b) **Plan amendments**. The Plan Teams may also play a role in the development and evaluation of amendments to the BS/AI and GOA groundfish fishery management plans.

(i) The Plan Teams may evaluate amendment proposals and forward their recommendations to the Plan Amendment Advisory Group, on which the Plan Team chairpersons serve.

(ii) In addition, the Plan Teams may develop their own amendment proposals.

(iii) Once an amendment proposal has been accepted for consideration by the Council, an analytical team may be assembled by the responsible agencies. Every analytical team should include at least one member from one or both Plan Teams, drawn from the appropriate working group(s), whenever possible.

(iv) Once an amendment analysis has been completed, it may be reviewed by the Plan Teams. The Plan Teams' comments, if any, are then forwarded to the SSC, AP, and Council.

Appendix 2. Terms of Reference for the BSAI Crab Plan Team.

Plan Team for the King and Tanner Crab Fisheries
of the Bering Sea/Aleutian Islands
TERMS OF REFERENCE
(May 2005)

1. Establishment. The North Pacific Fishery Management Council (Council) shall establish a Plan Team for the king and Tanner crab fisheries of the Bering Sea/Aleutian Islands (BS/AI) area. The Plan Team will provide the Council with advice in the areas of regulatory management, natural and social science, mathematics, and statistics as they relate to the king and Tanner crab fisheries of the BS/AI area.

2. Membership. Plan Team members will be appointed from government agencies, academic institutions, and organizations having expertise relating to the crab fisheries of the BS/AI. Normally, the Plan Team will consist of at least one member from the Council staff, the National Marine Fisheries Service (NMFS), the Alaska Department of Fish & Game, the University of Alaska, and other universities and institutions. Alternate members may be assigned to participate in case a member cannot attend a meeting. With the consent of the sponsoring agency or institution, nominations may be made by the Council, the Scientific and Statistical Committee (SSC), the Advisory Panel (AP), or the Plan Team. All nominations will be subject to approval by the SSC, with the Council retaining final appointment authority. Appointments should reflect the Plan Teams' responsibility to evaluate and make recommendations on management, biological, economic and social conditions of the fisheries.

3. Organization. The Plan Team will be directed by a chairperson, and may divide some of its responsibilities among work groups organized according to subject matter. A work group may also include members from the BS/AI groundfish Plan Team. Each work group will be directed by a work group leader.

   (a) Rules of order. In general, rules of order will be informal. Plan Team decisions will be reached by consensus, whenever possible. If a decision is required and consensus cannot be reached, the opinion of the majority will prevail. In representing the Plan Team publicly, the spokesperson will take care to relate Plan Team opinions accurately, noting points of concern where consensus cannot be reached.

   (b) Meetings. A minimum of two Plan Team meetings will be held annually in so far as practicable to discuss guideline harvest levels, status and management of the BSAI crab stocks. The timing and scope of meetings, in so far as practicable, will be as follows; a spring meeting will be held with the intention of reviewing the previous year's fishery catch data, the methodology for stock assessment modeling, preliminary stock assessment and any additional issues pertinent to the summer research schedule. A following summer/fall meeting will be held with the intention to discuss the status of stocks. This meeting would be intended to occur prior to the TAC determinations by the state. The fall meeting shall be held at a time that ensures availability of TAC specifications for the allocation of crab resources under crab rationalization. It is understood that this status of stocks meeting does not preclude additional Inter-agency meetings prior to TAC setting. The Plan Team chairperson may call other meetings as necessary. The Crab Plan Team may meet separately or jointly with the BSAI Groundfish Plan Team to discuss areas of joint concern. A draft agenda will be prepared in advance of each meeting by the Council staff in consultation with the chairperson, and may be revised by the Plan Team during the meeting. Minutes of each meeting will be prepared by the Council staff, distributed to Plan Team members, and revised as necessary at or before the subsequent Plan Team meeting. The Chairperson (or designee) will report the Team's finding to the Council.

   (c) Selection of officers. Officers (Plan Team Chair, Vice Chair and workgroup leaders) will be selected

at the meeting preceding the annual Plan Team meeting or as vacancies arise. The Plan Team Chairperson and Vice Chair will be selected at the annual meeting for two-year terms. It is the intent of the Team that after two years the Vice Chair will succeed as Chair and the following election will be for the position of Vice Chair. This process will continue on a two-year cycle. Work group leaders will be selected for one-year terms. There will be no limit on the number of consecutive terms that officers may serve.

4. Functions. The Plan Teams' primary function is to provide the Council with the best available scientific information, including scientifically based recommendations regarding appropriate measures for the conservation and management of the BS/AI king and Tanner crab fisheries. All recommendations must be designed to prevent overfishing while achieving optimum yield (National Standard 1). All recommendations must also be scientifically based (National Standard 2), drawing upon the Plan Teams' expertise in the areas of regulatory management, natural and social science, mathematics, and statistics. Finally, uncertainty must be taken into account wherever possible (National Standard 6).

   (a) SAFE report. The Plan Team compiles a SAFE report for the BS/AI king and Tanner crab fisheries on an annual basis. The SAFE report provides the Council with a summary of the most recent biological condition of the crab stocks and the social and economic condition of the fishing and processing industries. The SAFE report summarizes the best available scientific information concerning the past, present, and possible future condition of the crab stocks and fisheries, along with ecosystem concerns.

   (b) Plan amendments. The Plan Team may also play a role in the development and evaluation of amendments to the BS/AI king and Tanner crab fishery management plan, as well as evaluate amendments to the groundfish fishery management plan that may affect the conservation and management of BS/AI crab resources.

      (i) The Plan Team may evaluate amendment proposals and forward their recommendations to the Council.

      (ii) In addition, the Plan Team may develop their own amendment proposals.

      (iii) Once an amendment proposal has been accepted for consideration by the Council, an analytical team may be assembled by the responsible agencies. Every analytical team should include at least one member from the Plan Team, drawn from the appropriate working group(s), whenever possible.

      (iv) Once an amendment analysis has been completed, it may be reviewed by the Plan Team. The Plan Team's comments, if any, are then forwarded to the SSC, AP, and Council.

   (c) Peer Review. The plan team deliberations shall constitute part of the peer review process specified by current OMB policies provided that members directly involved in the production of a scientific product will recuse themselves from the review.

Appendix 3. Terms of Reference for the Alaska Scallop Plan Team.

Plan Team for the Alaska Scallop Fisheries
TERMS OF REFERENCE
(March 2005)

1. **Establishment**. The North Pacific Fishery Management Council (Council) shall establish a Plan Team for the Alaska scallop fisheries and this. The Plan Team will informprovide the Council regarding issues with advice in the areas of regulatory management, natural and social science, mathematics, and statistics as they that relate to the scallop fisheries off Alaska.

2. **Membership**. Plan Team members will be appointed from government agencies, academic institutions, and organizations having expertise relating to the scallop fisheries. Normally, the Plan Team will consist of at least one member from the Council staff, the National Marine Fisheries Service (NMFS), the Alaska Department of Fish & Game, and other universities and institutions as appropriate. Alternate members may be assigned to participate in case a member cannot attend a meeting. With the consent of the sponsoring agency or institution, nominations may be made by the Council, the Scientific and Statistical Committee (SSC), the Advisory Panel (AP), or the Plan Team. All nominations will be subject to approval by the SSC, with the Council retaining final appointment authority. Appointments should reflect the Plan Teams' responsibility to evaluate and make recommendations on management, biological, economic and social conditions of the fisheries.

3. **Organization**. The Plan Team will be directed by a chairperson, and may divide some of its responsibilities among work groups organized according to subject matter. A work group may also include members from the groundfish or crab Plan Team or members with other expertise as necessary. Each work group will be directed by a work group leader.

   (a) **Rules of order**. In general, rules of order will be informal. Plan Team decisions will be reached by consensus, whenever possible. If a decision is required and consensus cannot be reached, the opinion of the majority will prevail. In representing the Plan Team publicly, the spokesperson, (meaning the chairperson or the chairperson's designee) will take care to relate Plan Team opinions accurately, noting points of concern where consensus cannot be reached.

   (b) **Meetings**. The Plan Team will meet annually.An annual Plan Team meeting will be held to discuss guideline harvest levels, status and management of the scallop stocks. The Plan Team chairperson may call other meetings as necessary. The Plan Team may meet separately or jointly with the BSAI Crab or Groundfish Plan Teams to discuss areas of joint concern. A draft agenda will be prepared in advance of each meeting by the Council staff in consultation with the chairperson, and may be revised by the Plan Team during the meeting. Minutes of each meeting will be prepared by the Council staff or designee, distributed to Plan Team members, and revised as necessary at or before the subsequent Plan Team meeting. The Chairperson (or designee) will report the Team's findings to the Council.

   (c) **Selection of officers**. Officers (Plan Team chairperson and work group leaders) will be selected for two year terms at the annual Plan Team meeting preceding the annual Plan Team meeting or as vacancies arise. The Plan Team chairperson will be selected at the annual meeting for a one year term. Work group leaders will be selected for one-year terms. There will be no limit on the number of consecutive terms that officers may serve.

   (d) **Public participation.** Public participation is encouraged but may be limited due to time or other constraints and participation will be generally informal and at the discretion of the chairperson.

4. **Functions**. The Plan Teams' primary function is to provide the Council with the best available scientific information, including scientifically based recommendations regarding appropriate measures for the conservation and management of the Alaska scallop fisheries and compliance with the FMP, the Magnuson Stevens Act and all applicable federal laws. All recommendations must be designed to prevent overfishing while achieving optimum yield (National Standard 1). All recommendations must also be scientifically based (National Standard 2), drawing upon the Plan Teams' expertise in the areas of regulatory management, natural and social science, mathematics, and statistics. Finally, uncertainty must be taken into account wherever possible (National Standard 6).

   (a) **SAFE report**. The Plan Team compiles a SAFE report for the Alaska scallop fisheries on an annual basis. The SAFE report provides the Council with a summary of the most recent biological condition of the stocks and the social and economic condition of the fishing and processing industries. The SAFE report summarizes the best available scientific information concerning the past, present, and possible future condition of the scallop stocks and fisheries, along with ecosystem concerns.

   (b) **Plan amendments**. The Plan Team may also play a role in the development and evaluation of amendments to the fishery management plan, as well as evaluate amendments to other management plans that may affect the conservation and management of scallop resources.

      (i) The Plan Team may evaluate amendment proposals and forward their recommendations to the Council.

      (ii) In addition, the Plan Team may develop their own amendment proposals.

      (iii) Once an amendment proposal has been accepted for consideration by the Council, an analytical team may be assembled by the responsible agencies. Every analytical team should include at least one member from the Plan Team, drawn from the appropriate working group(s), whenever possible.

      (iv) Once an amendment analysis has been completed, it may be reviewed by the Plan Team. The Plan Team's comments, if any, are then forwarded to the SSC, AP, and Council.







ECONOMIC IMPACTS AND CONTRIBUTIONS OF SPORTFISHING IN ALASKA



2007 REPORT



A Message from the Director

CHARLIE SWANTON, DIRECTOR
ADF&G, DIVISION OF SPORT FISH

Alaska supports arguably some of the finest and most diverse sportfishing in the world. These opportunities provide Alaskans with a significant and sustainable source of food, relaxation, and social benefits. Additionally, the money spent by residents and visitors who participate in sportfishing activities produces significant economic benefits to Alaska.

The Division of Sport Fish is committed to providing an array of biological, social and economic information to fishery managers and fishery regulators who plan and evaluate fishery projects and make informed decisions about the management of fishery resources.

This report summarizes a recent effort by the Division to provide estimates of angler spending in Alaska and the contribution it makes to Alaska's economy. The results are based on an extensive statewide study of resident and nonresident anglers who went sportfishing in Alaska during 2007. The report contains estimates of the total expenditures on sportfishing by anglers and estimates of the subsequent economic effects this spending had in terms of employment, wages, salaries and tax receipts.

A key objective of this project was to establish a consistent and repeatable methodology for collecting and reporting estimates of economic contribution in Alaska such that reasonably precise estimates would be routinely available to agency personnel, fisheries decision-makers, and the public.

We hope that you find the following information useful and that it contributes to well-informed decision making.





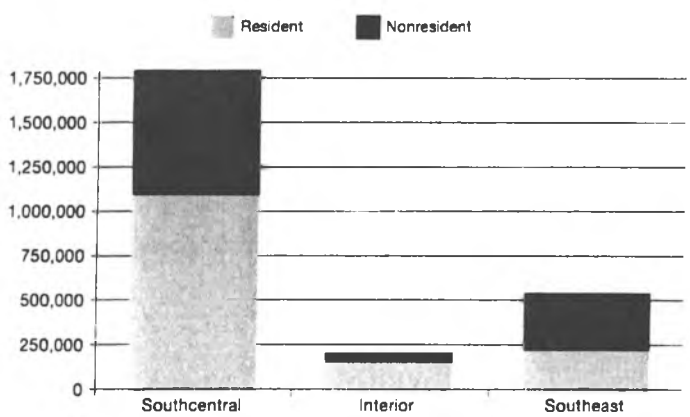
Sportfishing in ALASKA

Sportfishing is an important component of the Alaskan economy. It contributes to the well-being of Alaskans as recreation, as a source of food, and as part of the state's collective economic fabric. In 2007, 190,644 Alaska residents bought a fishing license, along with 284,890 nonresidents.

Spending a day fishing with rod and reel usually involves spending at least some money for travel, equipment, and supplies. Because a large number of anglers—both resident and nonresident—spend many days each year enjoying Alaska's diverse fishing opportunities, the annual total of that spending is substantial.

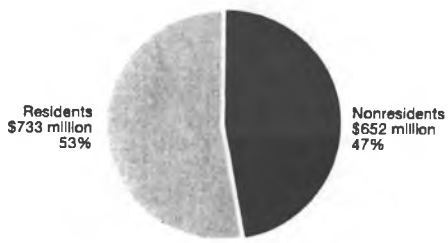
The money spent by anglers in turn helps to support thousands of Alaskan jobs in industries ranging from fishing tackle sales to hospitality and lodging to air taxi and guide services which are an important part of the economy in many of Alaska's local communities. At the same time, angler spending is also creating federal, state and local tax revenues which support local and borough governments and help pay for fisheries management in Alaska.

DAYS OF SPORTFISHING IN ALASKA BY REGIONS AND RESIDENCY, 2007

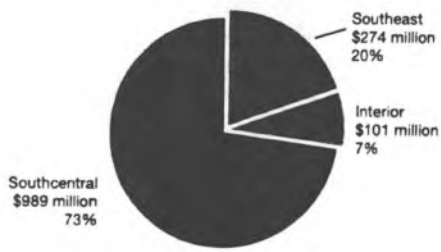


TOTAL SPORTFISHING EXPENDITURES, All ANGLERS

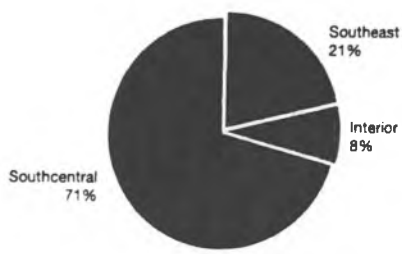
$1.4 billion



SPORTFISHING EXPENDITURES BY REGION, ALL ANGLERS



DAYS OF SPORTFISHING BY REGION, ALL ANGLERS





Economic IMPACTS & Contributions

The purpose of the study was to obtain current estimates of the economic contribution of sportfishing activities to the Alaska economy and to develop a consistent method for producing such estimates on a regular basis. This project provides a survey-based process that can now be updated periodically at reasonable cost.

For 2007, the year covered by this report, 1,163 resident and 1,807 nonresident surveys were completed by anglers who fished in Alaska. From the survey responses collected, estimates of how much each angler spends per day of fishing and per year on fishing-related equipment were produced. These survey results were combined with the total number of licensed anglers in 2007 and the total days of fishing in Alaska as estimated by the Division's Statewide Harvest Survey. This survey, conducted every year by the Division, tracks annual sportfishing participation and harvest. By combining the economic survey results with the Statewide Harvest Survey results, it was possible to estimate the total amount of resident and nonresident spending in Alaska as a whole and within specific regions of the state.

An economic model was then used to estimate the additional economic effects that angler spending produced within each region of the state. Using the collective dollars spent by anglers, an economic model known as IMPLAN estimated the total jobs, tax revenues and other economic contributions. Regional as well as statewide totals can be determined and are summarized in the following pages. Information on the dollars associated with guided fishing trips and with nonresident fishing is also included. First, here are some statewide highlights.

Economic Impact vs. Economic Contribution

This project measured and reported the economic impacts and contributions of licensed anglers to Alaska's state and regional economies. The words "impact" and "contribution" are not necessarily synonymous.

Economic impact typically refers to the effects of money being brought in from outside the state or region. It was possible to estimate the total amount of resident and nonresident spending in Alaska as a whole and within specific regions by combining the economic survey results with the ADF&G Statewide Harvest Survey results.

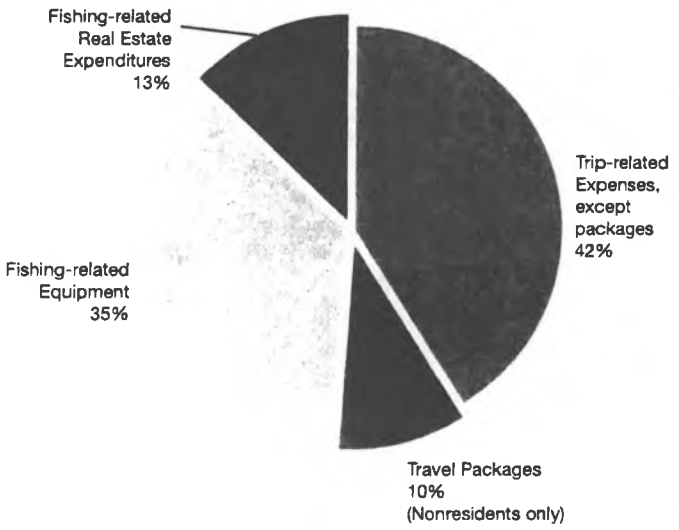
Economic contribution refers to in-state spending by all anglers. In theory, if the dollars spent by resident anglers were not spent on sportfishing, the same money would be spent on other things and would still stimulate economic activity. It isn't possible to accurately predict whether these local dollars would be spent in or outside of Alaska.

This study generated both economic impact estimates (nonresident spending) as well as estimates of the economic contributions of spending by Alaska anglers in 2007.

Total Resident and Nonresident Sportfishing Expenditures, by Category

	Resident Anglers	Nonresident Anglers	All Anglers
Licenses and Fees	$6,627,558	$16,536,955	$23,164,513
Trip Expenditures (non-package)	$219,829,151	[illegible]	$567,188,150
Package Expenditures	n/a	$137,519,700	$137,519,700
Equipment Expenditures	$433,693,104	$41,385,450	$475,078,554
Real Estate Expenditures	$73,139,537	$109,697,619	$182,837,156
Total Expenditures	**$733,289,349**	**$652,496,723**	**$1,385,788,072**

TOTAL ANGLER SPENDING BY CATEGORY



Average Per Day Expenditure for Trip-Related Items Only, Including Package Trips

(Lodging, fuel, food, travel packages, etc.)

	Per Day
All Alaska Fishing Combined	**$277.46**
Residents Only	$150.63
Non-Residents Only	$448.78
Saltwater	
Residents, Unguided	$162.81
Residents, Guided	$466.53
Non-Residents, Unguided	$209.40
Non-Residents, Guided	$744.03
Freshwater	
Residents, Unguided	$91.73
Residents, Guided	$509.56
Non-Residents, Unguided	$213.24
Non-Residents, Guided	$790.41

ECONOMIC ACTIVITY, OR MULTIPLIER EFFECT: SUPPORTED BY GUIDED AND UNGUIDED FISHING TRIPS

Trip-related and Package Expenditures*



JOBS: SUPPORTED BY GUIDED AND UNGUIDED FISHING TRIPS

Trip-related and Package Expenditures*



*Only trip related expenditures (food, fuel, lodging, etc.) could be divided into guided and unguided portions. It was not possible to divide equipment expenditures in such a manner.



How Economic Effects Occur

While the economic effects of sportfishing occur on a large scale statewide, it's important to note that they happen one angler at a time.

Suppose, for example, that a construction worker in downtown Anchorage decides to go fishing on his day off. He stops after work at the local tackle shop and spends $250 for a rod and reel along with some line, lures, a knife and cooler. Sandwiches, soda, and ice for the trip come from the local grocery store, and he spends still more money to fill his vehicle with gas on the way home. Very early the next morning, he starts the 150 mile drive out the Seward and Sterling highways to the Kenai River where he'll fish for king or coho salmon.

Meanwhile, the money he left behind goes to work. Some of the money he spent for fishing gear helps to pay the wages of a sales clerk, for example, who in turn spends some that evening at a local restaurant, to buy groceries, or pays his utility bill at the local light and power company. These payments, known collectively as the "multiplier effect", help to support still other jobs as the money our angler spent ripples outward in many directions through the local economy, even to those sectors not directly related to fishing. *See page 11 for more definitions.*

Regional Economic EFFECTS

Economic effects can be measured regionally and locally as well as statewide. Alaska has several distinct regions, each with its own characteristic sport fisheries that show different patterns in angling participation, spending, and economic effects.

STATEWIDE RESULTS

Alaska is blessed with many world-class freshwater and marine fisheries. In 2007, resident and nonresident anglers spent nearly $1.4 billion on equipment, boats, and trip-related and other items. Alaska anglers on average spent $2,914 on sportfishing trip expenses, fishing-related equipment, licenses, and other items in 2007. The actual amount spent per angler varies based on his or her preferred fishing locations, region, and more. Details are available in the technical report (see sidebar on page 8).

As anglers' expenditures exchange hands, economic contributions are generated statewide. In 2007, these contributions amounted to 15,879 jobs, $246 million in tax revenues and $545 million in income. Economic output, which is the value of all goods and services produced by businesses as a result of anglers' expenditures, was just over $1.6 billion.

SOUTHEAST (REGION I)

The so-called Panhandle area extending roughly from Yakutat south-southwest through Juneau and Ketchikan to the British Columbia border is a complex maze of islands, straits, and mountains. The saltwater salmon fishing here is outstanding, although some anglers find steelhead, along with river-resident trout, to be just as appealing.

Total spending by all anglers, resident and nonresident combined, for Southeast Alaska in 2007 was estimated to be $274 million. The total economic output came to $295 million, which supported 3,063 jobs and generated $22 million in state and local taxes.



SOUTHEAST MARINE (SUBREGION)

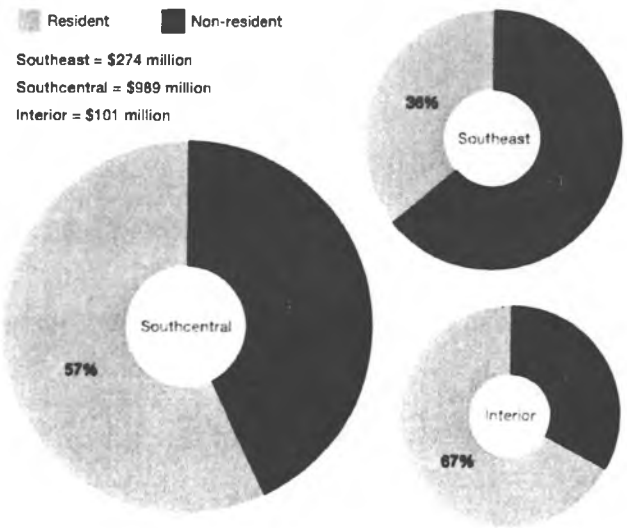
Within southeast Alaska, the popularity of salt-water fishing accounted for almost half of all angler spending. Saltwater anglers in southeast Alaska spent $132 million of the $274 million spent on sportfishing in southeast Alaska in 2007, which supported 1,897 jobs and created $14 million in state and local tax revenues.

SOUTHCENTRAL (REGION II)

This is by far the most popular angling region in Alaska as measured in total angler days. It includes Prince William Sound, Cook Inlet and the Anchorage area, as well as Kodiak Island and the Bristol Bay area to the west of Cook Inlet. All five salmon species are fished widely here in both salt- and fresh-water, along with halibut and other saltwater species. Trophy rainbow trout in the various Bristol Bay drainages are world-famous.

Anglers spent $989 million in the Southcentral region in 2007, supporting 11,535 area jobs and creating $91 million in state and local taxes.

RESIDENT AND NONRESIDENT EXPENDITURES BY REGION



Economic measures reported in this chart are based on regional IMPLAN model outputs using 2007 angler expenditures.



For More Details...

This report is a summary of a 300 page technical report available free from the Alaska Department of Fish and Game, Division of Sport Fish. The complete report presents detailed descriptions of the methods and data sources used in the study, as well as the complete results. Visit ***www.sf.adfg.state.ak.us/statewide/economics*** *to download a copy in PDF form. You may also contact the Department at (907) 267-2366, or william.romberg@alaska.gov, to request a printed copy of the report.*

Regional Economic EFFECTS (cont.)

COOK INLET (SUBREGION)

Notably, much of Southcentral's economic activity centers around the Cook Inlet area, partly because Anchorage and the Matanuska-Susitna valley are such large population centers with good fishing nearby. The Kenai River, for example, is an easy drive from Anchorage and is widely known among anglers as one of the world's foremost salmon rivers. In addition, there are large sport fisheries for halibut and other groundfish that are accessed from several communities that border Cook Inlet. In the Cook Inlet subregion alone (a subset of Southcentral region), anglers spent about $733 million in 2007, which supported 8,056 jobs and generated $55 million in state and local taxes.

INTERIOR (REGION III)

Among anglers, the northern two-thirds of the state could be called the road less traveled. This vast area contains many small communities and sport fisheries located off the road system with fisheries less accessible than places farther south in the state. However, the fishing is none the less exceptional, and in addition to salmon and trout there are fisheries for unique species such as sheefish, arctic char, and burbot, as well as huge northern pike found in the "flats" region of the lower Yukon River.

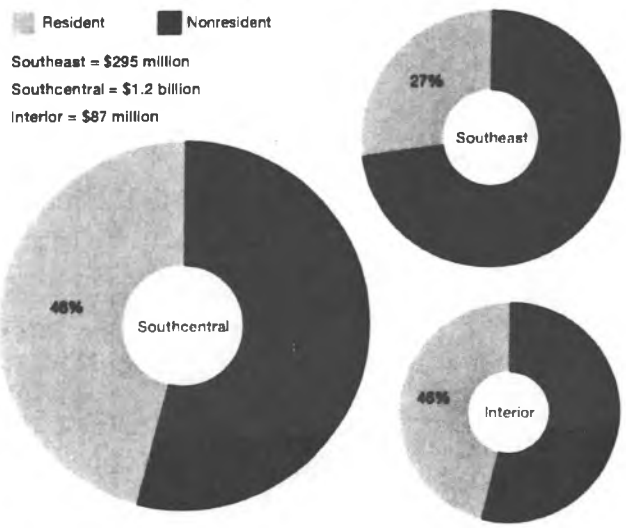
Angling traffic here is lighter than in other regions of the state but still significant. Total regional spending by all anglers in this region topped $101 million in 2007 and directly or indirectly supported 923 area jobs and $7 million in state and local taxes.



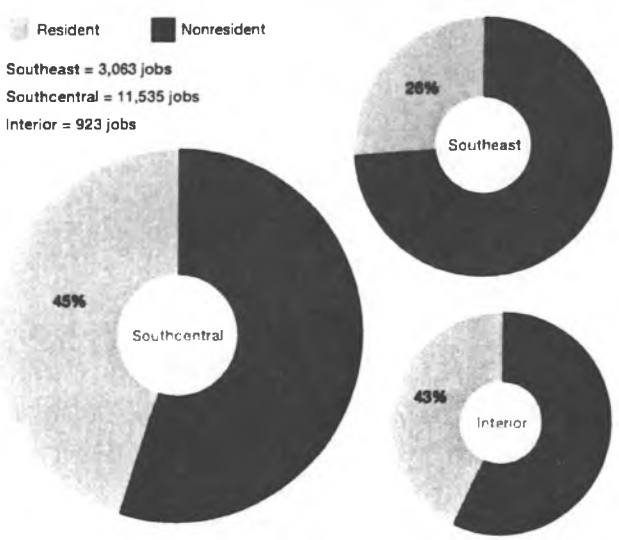
Total Angler Expenditures

$1.4 Billion

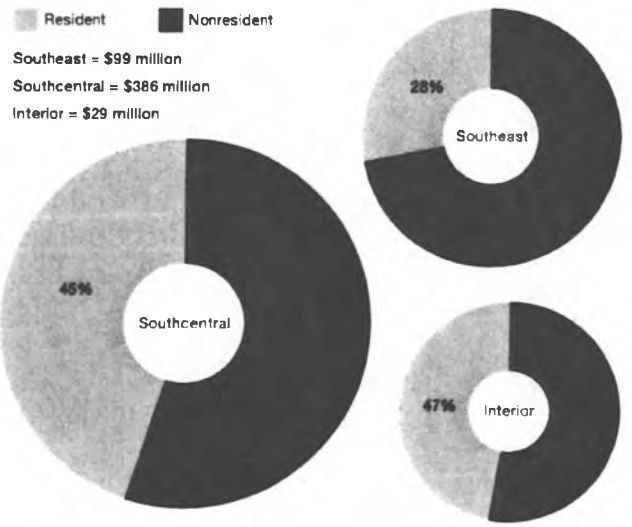
RESIDENT AND NONRESIDENT OUTPUT BY REGION



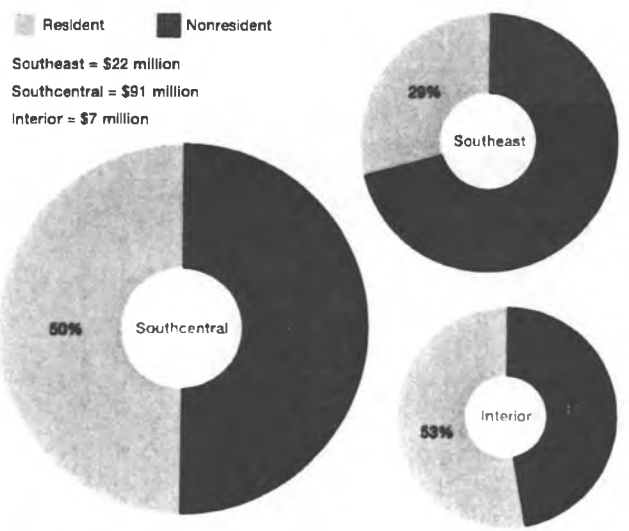
RESIDENT AND NONRESIDENT EMPLOYMENT BY REGION



RESIDENT AND NONRESIDENT INCOME BY REGION



RESIDENT AND NONRESIDENT STATE & LOCAL TAX REVENUES BY REGION



Sportfishing-related Jobs

15,879

Economic measures reported in these charts are based on regional IMPLAN model outputs using 2007 angler expenditures.

See page 11 for definitions of terms used on this page.

Economic Contributions of Sportfishing in Alaska, by Residency & Region, 2007

	Resident Anglers	Nonresident Anglers	All Anglers
ALASKA - STATEWIDE RESULTS			
Anglers' expenditures	$733,289,349	$652,498,723	$1,385,788,072
Output	$668,729,829	$938,863,856	$1,607,593,685
Income	$223,373,937	$321,882,151	$545,256,088
Jobs	6,442	9,437	15,879
Tax Revenues	$107,433,533	$138,881,701	$246,315,114
Local & State	*$56,509,573*	*$66,632,831*	*$123,142,404*
Federal	*$50,923,959*	*$72,248,870*	*$123,172,709*
SOUTHEAST REGION			
Anglers' expenditures	$98,613,993	$174,890,811	$273,504,804
Output	$79,385,025	$215,874,985	$295,260,010
Income	$27,316,008	$71,825,686	$99,141,694
Jobs	791	2,273	3,063
Tax Revenues	$12,227,368	$31,368,564	$43,595,932
Local & State	*$6,376,236*	*$15,686,783*	*$22,063,019*
Federal	*$5,851,132*	*$15,681,782*	*$21,532,913*
SOUTHCENTRAL REGION			
Anglers' expenditures	$580,955,071	$427,603,048	$988,558,119
Output	$534,838,006	$630,707,507	$1,165,545,513
Income	$174,829,896	$211,633,737	$386,463,733
Jobs	5,170	6,365	11,535
Tax Revenues	$86,563,199	$93,692,068	$180,255,267
Local & State	*$45,612,530*	*$45,187,101*	*$90,799,631*
Federal	*$40,950,668*	*$48,504,967*	*$89,455,636*
INTERIOR REGION			
Anglers' expenditures	$67,092,727	$83,467,910	$100,560,637
Output	$40,133,830	$46,578,879	$86,712,709
Income	$13,283,706	$15,300,175	$28,583,882
Jobs	399	524	923
Tax Revenues	$6,718,270	$6,700,875	$13,419,146
Local & State	*$3,825,310*	*$3,396,831*	*$7,222,141*
Federal	*$2,894,961*	*$3,312,044*	*$6,197,005*

Output = total economic activity generated by angler spending
Income = salaries, wages, employee benefits and proprietors' profits stimulated by anglers
Jobs = same as employment, these are the total number of both full-time and part-time jobs supported by angler spending
Tax Revenues = the total personal and business tax revenues earned by local, state, and federal government that are generated by angler spending

Economic Contributions of Sportfishing for Specific Subregions, 2007

	Resident Anglers	Nonresident Anglers	All Anglers
COOK INLET (A SUBREGION OF THE SOUTHCENTRAL REGION)			
Anglers' expenditures	$457,938,464	$275,030,511	$732,968,975
Output	$413,287,612	$414,602,226	$827,889,838
Income	$136,650,136	$142,124,416	$278,774,552
Employment	4,010	4,046	8,056
Tax Revenues	$67,097,024	$44,445,496	$111,542,520
Local & State	*$35,189,444*	*$20,091,926*	*$55,281,369*
Federal	*$31,907,580*	*$24,353,570*	*$56,261,150*
SOUTHEAST REGION - MARINE FISHING ONLY[1]			
Anglers' expenditures	$21,265,271	$110,345,177	$131,610,448
Output	$28,244,412	$138,794,141	$167,038,552
Income	$9,132,220	$44,692,671	$53,824,891
Employment	301	1,595	1,897
Tax Revenues	$4,791,024	$21,577,534	$26,368,559
Local & State	*$2,713,584*	*$11,473,357*	*$14,186,941*
Federal	*$2,077,440*	*$10,104,178*	*$12,181,618*

Output = total economic activity generated by angler spending
Income = salaries, wages, employee benefits and proprietors' profits stimulated by anglers
Jobs = same as employment, these are the total number of both full-time and part-time jobs supported by angler spending
Tax Revenues = the total personal and business tax revenues earned by local, state, and federal government that are generated by angler spending
[1]The contributions are for trip spending only, including travel packages. It was not possible to allocate equipment and real estate expenditures by type of water fished.

Definitions of Terms Used in this Report

Angler Expenditures: the dollars spent for the primary reason of sportfishing. Such expenditures include trip-related expenses for fishing (fuel, guide services, lodging, etc.), fishing tackle and other fishing equipment, the portion of ancillary equipment used for fishing that may have multiple uses (e.g., coolers, binoculars), and real estate maintenance and construction expenditures if used primarily for the pursuit of sportfishing.

Total Multiplier Effect (also known as Total Economic Activity): the results (measured in output, income, jobs and taxes) of the total rounds of business and consumer spending stimulated by anglers' original expenditures.

Income: generated as a result of anglers' expenditures, this includes total payroll, including salaries and wages, as well as benefits such as insurance, and retirement benefits paid to employees and business proprietors.

Employment: the total number of both full-time and part-time jobs supported as a result of anglers' expenditures.

Tax Revenues: the total tax revenues earned by local, state and federal governments as a result of anglers' expenditures. All forms of local, state and federal taxes are included.

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Southwick Associates, based in Fernandina Beach, FL, was founded in 1989 to serve state fish and wildlife agencies and the sportfishing and hunting industries. From our north Florida offices, we continue to serve this core group, and now provide economic and business intelligence to many more.

Current Economic Impacts and Contributions of Sportfishing in Alaska: Summary Report 2007. Alaska Department of Fish and Game, Division of Sport Fish. January, 2009. Anchorage, Alaska.

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ABSTRACT

In 2006, 1,677 sport fishing businesses and 3,454 guides licensed under the Alaska Department of Fish and Game guide and business registration program, signifying intent to provide sport fishing services in Alaska. The program licensed 1,695 businesses and 3,531 guides in 2007, and 1,659 sport fishing businesses and 3,522 sport fishing guides in 2008. Of the 1,659 sport fishing businesses registered in 2008, 1,525 were combination owner/guide licenses. Based on the 2008 physical addresses of both the businesses and guides, 90% of the businesses were residents of Alaska, and 10% were from other residency strata (defined as nonresidents), 72% of the guides were residents and 28% were nonresidents.

Of the 2,553 saltwater logbooks issued in 2008, 2,089 were activated, and of the 2,538 freshwater logbooks issued in 2008, 1,785 were activated. Of those businesses that submitted logbook information in 2008, 58% offered saltwater services, and 42% offered freshwater guided services. In 2006, logbook records show that 1,368 saltwater vessels were active, 1,409 were active in 2007 and 1,355 were active in 2008. On average during those three years, 55% of the saltwater vessels were active in Southeast Alaska and 45% were active in Southcentral Alaska.

A total of 65,671 saltwater charter trips were conducted in 2006, 67,152 trips in 2007, and 62,006 trips in 2008 statewide. On average, 84% of the saltwater angler days were nonresidents, 12% were residents and 4% were crew, comped fishing or unknown residency. In freshwater, 46,781 trips were taken in 2006, 48,697 in 2007, and 48,501 in 2008. Of the statewide freshwater trips, 90% of the angler days were nonresidents, 8% were residents, and 2% were crew fishing or unknown residency.

Average saltwater salmon harvests between 2006 and 2008 show that coho and king salmon were the predominant species, consisting of 67% and 15% of the harvest respectively statewide. Saltwater bottomfish harvests between 2006 and 2008 show that Pacific halibut were the predominant species with 68% of the total saltwater harvest statewide. Total halibut harvest statewide ranged from 379,473 fish in 2007 to a low of 339,718 fish in 2008. In freshwater, coho salmon were the predominant harvested species, followed by sockeye and then king salmon.

Key words: Sport fishing, guide and business registration, freshwater logbook, saltwater logbook, participation, effort, harvest, sport fishing vessel, Pacific halibut, salmon, bottomfish, Southeast Alaska, Southcentral Alaska

BACKGROUND

The Alaska Department of Fish and Game (ADF&G) Division of Sport Fish (DSF) has operated a program since 1998 to register and license both sport fishing guides and sport fishing guide businesses and to collect information on sport fishing participation, effort, and harvest by saltwater and freshwater guided clients. This report briefly summarizes the approach, history, and results of this program for 2006 through 2008.

GUIDE AND BUSINESS REGISTRATION AND LICENSING

The activities of the guided sport fishing industry in Alaska have significantly increased in recent years with implications to fish allocation and management decisions. Resolution of related issues was hampered by lack of information regarding the industry and its impact on fishery resources in many parts of Alaska. The sport fishing guide and business registration and licensing programs were designed to provide a comprehensive system to better define this diverse industry throughout Alaska. A brief history of the statewide registration and licensing process follows.

Beginning in May 1995 the owner(s) of any business that engaged in sport fish guiding of anglers anywhere in Alaska were required to register their business information, employees acting as sport fishing guides for the business, and listing all vessels used for guiding. In 1997 sport fishing guides were required to register and provide information about the employing business (Dean 2001; Dean and Howe 1999).

In 1998, the Alaska Board of Fisheries (BOF) adopted new statewide sport fishing guide registration regulations and definitions during their February Statewide Finfish meeting in Girdwood, Alaska (5 AAC 75.075: *Sport Fishing Services and Sport Fishing Guide Services; License Requirements; Regulations of Activities)*. It should be stressed that this was a registration process, not a licensing process. No fees were required and businesses and guides were allowed to provide services in any area of the state, assuming other regulatory requirements were met. In 1998 ADF&G registered guide businesses and guides and stopped registering charter vessels, because the Commercial Fisheries Entry Commission (CFEC) implemented a licensing program for all vessels to be used for guided sport fishing. From 1998 through 2004, ADF&G continued to register sport fishing businesses and sport fishing guides.

On May 11, 2004, the Alaska Legislature adopted House Bill 452 (HB 452), that established licensing requirements for sport fishing guide business owners and sport fishing guides on a statewide basis. This bill was created to establish minimum professional standards that were required of both freshwater and saltwater sport fish guides and business owners before a license could be obtained. The standards were established to protect consumers and to promote the viability and legitimacy of a professional sport fish guide industry. Businesses providing sport fish guided services were now required to obtain a State of Alaska Occupational Business License and hold liability insurance with a minimum of $300,000 coverage for all incidents in a year (AS 16.40.260). Licensed sport fishing guides were required (1) to be citizens of the United States, Canada, or Mexico, (2) hold a current first aid card, (3) have a current year Alaska sport fishing license and (4) have a valid U.S. Coast Guard operator's license if they were to operate a motorized vessel in navigable waters. License application forms and the information collected have remained consistent in design from 2006 through 2008 (Appendix A).

LOGBOOKS

In February, 1998 the BOF adopted regulations (5 AAC 75.076) requiring logbooks for saltwater charter vessels statewide. Information on the amounts and locations of charter activity and actual participation and harvest by individual vessels and businesses was needed by the BOF for allocation and management of Chinook salmon *Oncorhynchus tshawytscha*, rockfish *Sebastes* spp., and lingcod *Ophiodon elongatus*, and by the North Pacific Fisheries Management Council (NPFMC) for allocation of Pacific halibut *Hippoglossus stenolepis*. To meet these information needs ADF&G implemented a saltwater sport fishing charter vessel logbook program for DSF Region I, Southeast Alaska (Southeast), and Region II, Southcentral Alaska (Southcentral; Table 1; Figure 1).

In 1999, the NPFMC was considering proposals to limit the guided sport halibut harvest. Their concerns were: (1) that growth in this fishery was reallocating resources away from the individual fishing quota (IFQ) commercial longline fishery, and (2) that in some areas there was overcapitalization and localized depletion of the halibut resource. NPFMC endorsed a two-prong approach to resolve the perceived impact of increased guided charter halibut fishing. The first was establishment of guideline harvest limits (GHL) for International Pacific Halibut Commission (IPHC) Areas 2C and 3A (Figure 2), and the second was a process to establish local area management plans for halibut fisheries in coastal communities.

Since 1998, the logbook design has undergone annual revisions, driven primarily by changes or improvements in the collection of halibut, lingcod and rockfish data through the logbook program, Statewide Harvest Survey (SWHS), and expanded port sampling programs. House Bill

452, adopted in 2004, not only established new licensing requirements, but also established a logbook reporting requirement for all freshwater businesses in addition to the existing saltwater reporting requirements. For various reasons, both technical and policy-based, information on halibut harvests was not collected from 2002 through 2005. The collection of halibut data was resumed in 2006. In addition, the 2006 logbook was redesigned to require reporting of angler license numbers and the harvest and release numbers by angler in an effort to improve reporting and facilitate evaluation of the quality of logbook data (Appendix C).

The data from logbooks are compiled to show where fishing effort occurs, the extent of participation, and the species and numbers of fish kept and released by individual clients. This information is used for regulation and the development and management of fisheries, for project evaluation, and for formulation of department policies and priorities that reflect angler needs, concerns, and preferences. It also provides ADF&G with a tool to promote management of Alaska's resources for sustained yield.

Table 1.–Division of Sport Fish regions and management areas.

Regions	
SE	Southeast Alaska
SC	Southcentral Alaska
AYK	Arctic-Yukon-Kuskokwim
Areas	
Southeast Alaska	
A	Ketchikan
B	Prince of Wales Island
C	Kake, Petersburg, Wrangell, Stikine
D	Sitka
E	Juneau
F	Haines-Skagway
G	Glacier Bay
H	Yakutat
Southcentral Alaska	
J	North Gulf Coast/Prince William Sound
K	Knik Arm Drainage
L	Anchorage
M	Susitna River Drainage
N	West Side Cook Inlet
P	Kenai Peninsula
Q	Kodiak
R	Naknek River Drainage/Alaska Peninsula Area
S	Kvichak River Drainage
T	Nushagak, Wood River and Togiak
Arctic-Yukon-Kuskokwim	
I	Upper Copper River Drainage
U	Tanana River Drainage
V	Kuskokwim River/Kuskokwim Bay Drainages
W	Norton Sound/Seward Peninsula
X	Northwest Alaska
Y	Yukon River Drainage
Z	North Slope/Brooks Range

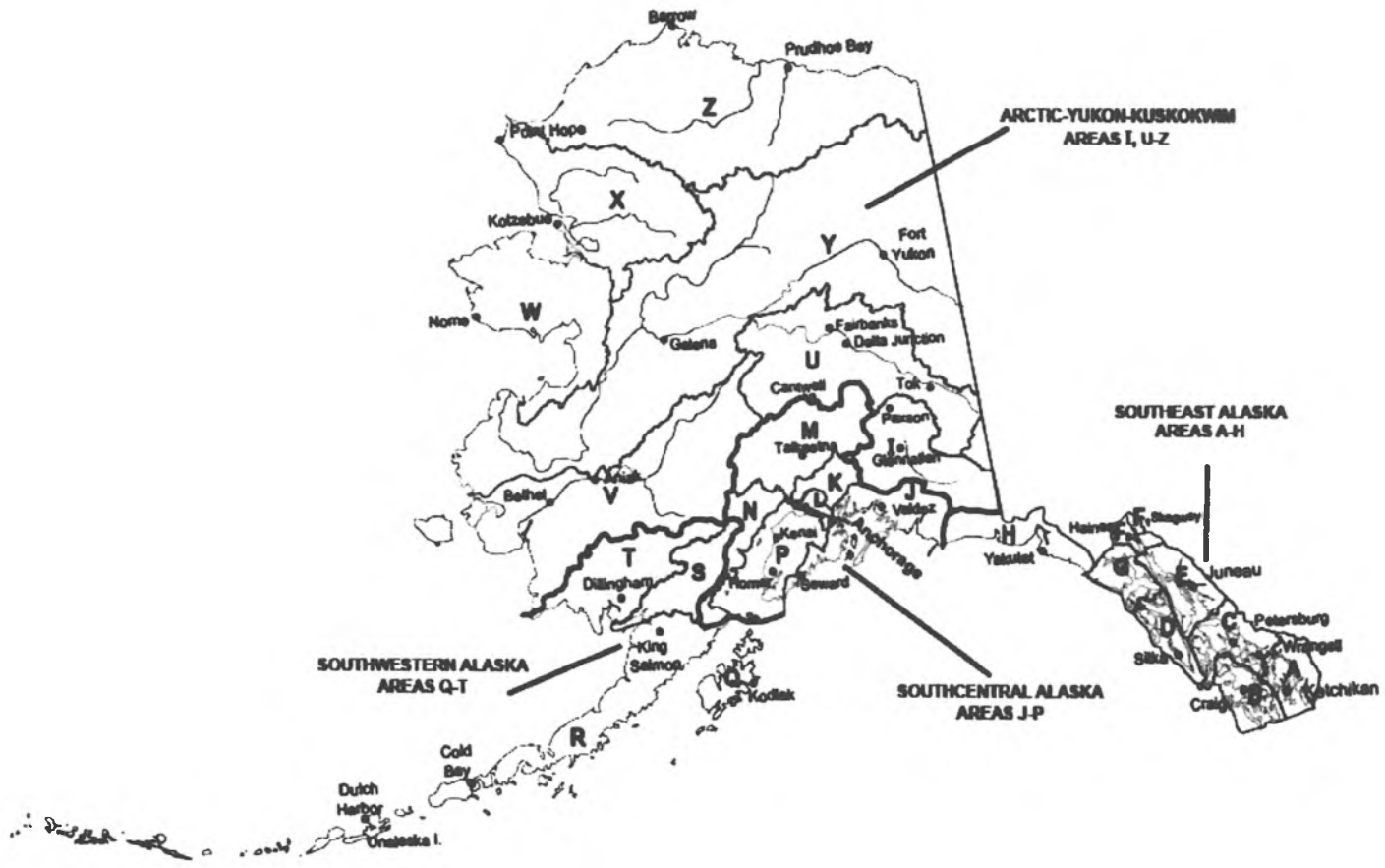


Figure 1.–Map of Alaska and Division of Sport Fish regions and management areas.

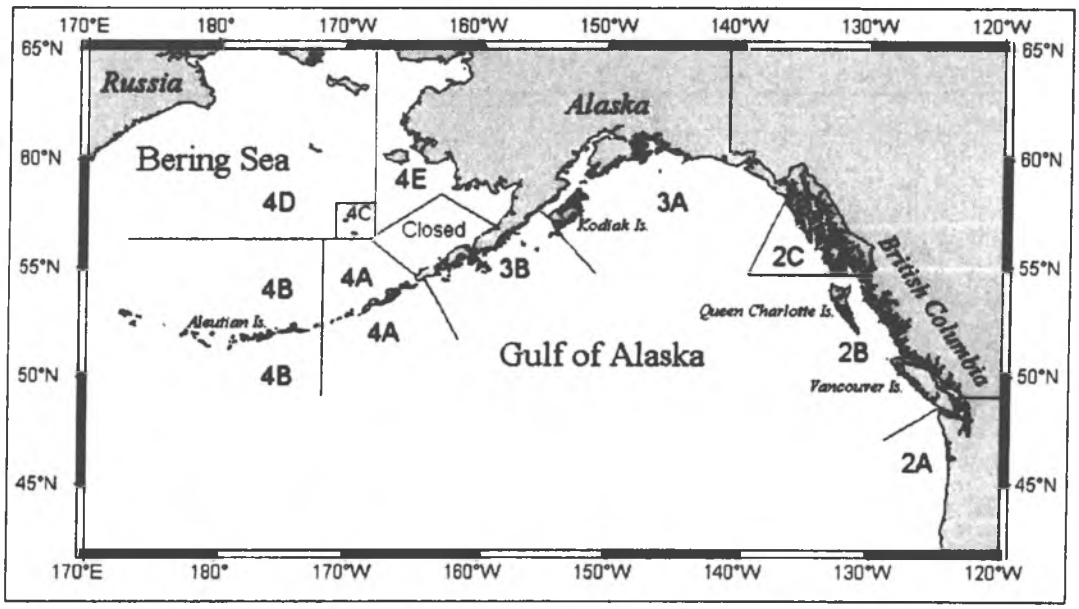


Figure 2.–International Pacific Halibut Commission (IPHC) regulatory areas.

Currently, a logbook record is required for every chartered or guided trip taken with clients, defined as an outing with one group of clients that ends when the clients and their fish (if fish were kept) are offloaded. Each trip is associated with an individual licensed business and guide.

VESSEL REGISTRATION

In addition to establishing a licensing program and statewide freshwater logbook requirement, HB 452 included establishment of a vessel registration program to be conducted by ADF&G as part of the logbook program to monitor the number of vessels used in the guided marine and freshwater fisheries. All boats used in marine or fresh water were referred to as "charter or guide boats" regardless of their size or the manner in which they are used. All vessels used in the charter guide industry were required to be registered with ADF&G. Vessel registration information was collected when logbooks were issued to a business. Registration information included the Department of Motor Vehicles or DMV number or the U.S. Coast Guard vessel documentation number. Upon completion of vessel registration with ADF&G, each vessel was provided with two decals and year tags to indicate that the vessel is used in the guide industry (Appendix B3 and B4). Decals must be applied and visible on both sides of the vessel.

METHODS

GUIDE AND BUSINESS LICENSING

Businesses and guides can be licensed to provide sport fishing guided services if they meet the minimum qualifications specified in regulation (AS 16.40.260 and AS 16.40.270).

During the month of January from 2006 through 2008, the Division of Sport Fish mailed renewal license applications to each sport fishing guide and sport fishing business that was licensed in the previous year. In addition, guides and businesses could obtain a license in person at local

ADF&G offices or through the Internet. The license applications could be used in any of three ways (Appendix A):

- To license a business only,
- To license a guide only,
- To license a combination business and guide (an owner/operator where the owner also conducted the guiding).

The licensing process collected business owner or guide name, permanent mailing information, permanent and inseason phone number if applicable. Additionally, the name of the business, name of the business owner, occupational business license number, insurance company information and insurance binder or policy number and effective dates were required. A guide is required to be a citizen of the United States, Canada, or Mexico, hold a current first aid card and have a current year Alaska sport fishing license along with any tags or permits required for specific fisheries. If a guide planned to operate a motorized vessel on navigable waters with clients on board, the guide was required to have a current U.S. Coast Guard Operator's License and provide that number and expiration date on the license application.

Unique license numbers were assigned according to how licensing occurred. License numbers did not remain the same in subsequent years. If an operator or guide licensed at an ADF&G office, a pre-numbered application was used and that number became the license number for that year. Renewal or internet license applications were randomly assigned numbers by the computer database that processed the information

Once the license applications were reviewed for completeness and accuracy, DSF mailed a wallet-sized license to each guide or business. Those applicants who licensed by going to an ADF&G office received a copy of their license, which allowed them to operate immediately. Those who licensed using the renewal application or by applying through the Internet, were required to wait until they received their license in the mail prior to operating or providing guiding services.

LOGBOOK DATA COLLECTION

A standard statewide saltwater logbook design was used from 2006 through 2008 (Appendix B). The freshwater logbook underwent very few changes between 2006 and 2008. Logbook reporting is a mandatory process governed by regulation (AS 16.40.280). As such, the reporting process was considered to be a census of all charter/guided trips. Logbooks were available and issued from ADF&G area offices located statewide, in addition to vendors located in Valdez and Seward.

Other than a few minor design changes, both the saltwater and freshwater logbooks collected the same information during all three years. Some changes were made to improve or simplify the use of the forms based on operator input, and to improve the capture of client and crew harvest information. Some of the annual design changes in the saltwater logbook were driven primarily by changes or improvements in the collection of halibut and rockfish data, and by requests from the NPFMC for information needed for allocation of halibut. In 2006, both logbooks were redesigned to require reporting of angler license numbers and the harvest and release numbers by angler in an effort to improve reporting and facilitate evaluation of the quality of logbook data. The most significant changes made to the saltwater logbook occurred between 2005 and 2006 (Appendix C).

Changes between the 2005 and 2006 saltwater logbooks included:

- The data page design went from a single page designed to collect information from nine different trips to a data page that collected information from one unique trip per page.
- A section to collect Business and Vessel Information was added. Business and Guide license numbers along with the Alaska Boat Registration number (AK. #) or U.S.C.G. documentation number was recorded on every data page. This information was intended to confirm that the information was associated with the correct business on record, and to validate the vessel registration information.
- A section to collect Trip information was added. Trip information collected the date fished, port or community where clients or fish were off-loaded, total number of clients on the vessel including those that did not fish, targeted species (salmon or bottomfish), primary statistical area fished, maximum number of rods fished, and number of boat hours fished. This design change resulted in more detailed information unique to each trip taken with a group of clients.
- A section to collect Individual Angler and Catch Information was added. In 2006, the collection of halibut information resumed. The new design also required the reporting of individual angler license numbers along with harvest and release numbers by angler in an effort to improve reporting and facilitate evaluation of the quality of logbook data.
- A signature line was added that required the guide who led the trip to sign their name certifying that the information was true and correct to the best of their knowledge.
- A notice statement drafted by the NPFMC was printed within the front cover of the 2006 saltwater logbook. The notice announced that a control date of December 9, 2005 was being established. Those businesses and guides not participating in the Southeast or Southcentral charter halibut industry by this date might not be eligible for future access and/or quota in these fisheries.

No significant changes took place in the freshwater logbook design between 2005 and 2006 (Appendix D).

Changes between the 2006 and 2007 saltwater logbooks include:

- Additional client information was obtained, to indicate if "comped" anglers fished. A "comped" angler was an angler who did not compensate the guide for that charter trip. By including "comped" anglers, the data captured by onsite dockside samplers and data from the logbook census were more comparable, since all anglers on board a charter vessel and their catches were now being counted.
- Vessel AK # or U.S.C.G. documentation numbers were no longer being collected on each data page. The vessel information collected during the logbook assignment to a business on the sign-out sheet was adequate.

No significant changes took place in the freshwater logbook design between 2006 and 2007 (Appendix D).

The changes to the saltwater logbook forms between 2007 and 2008 were in response to requests by the NPFMC in an effort to continue improvement in the collection of halibut information in preparation for a potential IFQ or moratorium program. Changes between the 2007 and 2008 saltwater logbooks include:

- A request to collect information on the port or community where the fishing trip began.
- Indicate the IPHC area fished: 2C, 3A, 3B or 4.
- The collection of the angler's first and last name in addition to the angler license number.
- The number of halibut kept year-to-date (YTD) in IPHC area 2C in anticipation of an annual limit on guided halibut harvest per client. The annual limit was never implemented but this column had already been added and logbooks distributed prior to the decision to not implement an annual halibut limit.
- The signature of an angler on the back side of each trip sheet if that angler kept halibut in 2C as verification of the information provided on the data page.

No significant changes took place in the freshwater logbook between 2007 and 2008 (Appendix D).

Saltwater Logbook Forms

A saltwater logbook consisted of the cover page, schedule of reporting deadlines, one logbook check out sheet to show the business to which the logbook was issued and register the saltwater vessel, a set of instructions for filling out the information on the logbook sheets, and 50 data sheets to record trip information. Data collection on each of the 50 pages consisted of:

- ADF&G business owner license number;
- ADF&G guide license number for the guide leading the trip;
- Date that fishing took place;
- Port or community where fishing began;
- Port or community of off loading,
- Total number of paying clients on the vessel (including those that did not fish, but not including "comped" anglers or crew members that fished);
- Primary statistical area fished while targeting salmon or bottomfish;
- Number of boat hours fished;
- Crew, client, and "comped" angler's current ADF&G sport fishing license or PID (permanent fishing license) number, birthdate of youth anglers under the age of 16;
- First and last name of each client and youth angler;
- Client residency(Alaska resident/nonresident of Alaska);
- A breakdown by fish species kept (and/or released) by each individual angler.

During a saltwater charter trip, the operator must decide if his/her gear or fishing methods are effectively targeting bottomfish, salmon or both. A 6-digit statistical code where most of the fish were caught or targeted is logged for each trip. Statistical maps were provided to the operator upon logbook issuance.

Saltwater species information collected included kept and released information for "large" Chinook (king salmon) 28" and longer and for "small" Chinook (king salmon) less than 28". Also recorded were coho *O. kisutch*, sockeye *O. nerka*, pink *O. gorbuscha*, and chum *O. keta*

ALASKA FEDERATION OF NATIVES

2009 CONVENTION

RESOLUTION 09-01

TITLE: THE PROTECTION OF ALASKA NATIVE SUBSISTENCE ACTIVITIES AND ACCESS TO, AND TAKINGS, OF CUSTOMARY AND TRADITIONAL AND CULTURAL SUBSISTENCE RESOURCES

WHEREAS: Alaska Native peoples developed rich cultures and enduring societies around their spiritual relationship to the land and resources; and

WHEREAS: Our harvest and utilization of natural resources has been the basis of our sustainable economies through thousands of years; and

WHEREAS: Customary and traditional subsistence hunting and fishing is vital to the survival of Alaska Native cultures and our communities' economic well being; and

WHEREAS: The United Nations Declaration on the Rights of Indigenous Peoples supports Indigenous rights to use and manage resources necessary for our food security; and

WHEREAS: The Marine Mammal Protection Act provides for Alaska Native heritage rights for Marine Mammals; and

WHEREAS: Section 4(b) of the Alaska Native Claims Settlement Act of 1971 (ANCSA) extinguished aboriginal hunting and fishing rights; and

WHEREAS: Congress, through the Conference Report accompanying passage of ANCSA, declared its intent and expectation that the Secretary of the Interior and the State of Alaska should protect Alaska Native customary and traditional subsistence activities; and

WHEREAS: Congress enacted Title VIII of the Alaska National Interest Lands Conservation Act of 1980 (ANILCA), which established a priority for rural resident subsistence users on federal lands and reserved navigable waters; and

WHEREAS: ANILCA authorizes the State of Alaska to regulate customary and traditional subsistence harvests on all lands and waters so long as such regulation is in compliance with the mandates outlined in Title VIII of ANILCA; and

WHEREAS: In 1990, the federal government was forced to assume management authority over customary and traditional subsistence activities on federal public lands and waters because the State of Alaska failed to adequately enact a subsistence priority for rural Alaskans; and

WHEREAS: The Federal Subsistence Management Program is a multi-agency effort to provide the opportunity for a subsistence way of life by rural Alaskans on federal public lands and waters while maintaining healthy populations of fish and wildlife; and

WHEREAS: The Secretaries of the Interior and Agriculture have delegated to the Federal Subsistence Board the authority to manage fish and wildlife for subsistence uses on federal public lands and waters in Alaska; and

WHEREAS: The Federal Subsistence Board is the decision-making body that oversees the Federal Subsistence Management Program, and is comprised of the regional directors of the U.S. Fish and Wildlife Service, National Park Service, Bureau of Land Management, Bureau of Indian Affairs, the U.S. Forest Service, and a chairman appointed by the Secretaries of the Interior and Agriculture; and

WHEREAS: The Federal Subsistence Board membership is now dominated by non-subsistence users and federal employees who lack an appreciation of the significance of traditional subsistence uses, and who have improperly sought to balance the needs of commercial, sport, pleasure and subsistence users, rather than trying to protect Alaska Native access to subsistence resources, as directed by their mandate under Title VIII of ANILCA; and

WHEREAS: The State of Alaska successfully promoted the adoption of a Memorandum of Understanding between the Federal Subsistence Board and the State of Alaska that has seriously undermined Title VIII of ANILCA; and

WHEREAS: The current federal subsistence management scheme has failed to protect traditional subsistence users, and Alaska Natives are finding themselves subject to state citations for traditional subsistence practices that should be protected under Title VIII of ANILCA; and

WHEREAS: Immediate administrative and legislative action is necessary to protect Native traditional subsistence rights and uses;

NOW THEREFORE BE IT RESOLVED by the delegates to the 2009 Annual Convention of the Alaska Federation of Natives that Alaska Federation of Natives shall pursue the following executive and legislative actions to:

1. Seek immediate Congressional oversight hearings in Alaska to be held before the U.S. Senate Committee on Indian Affairs and the House Committee on Natural Resources regarding, access to, and takings of, customary and traditional subsistence resources by Alaska Natives, Alaska Native Corporations, and the federally recognized tribes; and

2. Seek immediate consultation between Alaska Native corporations, federally recognized tribes in Alaska, and the Departments of the Interior, Agriculture and Commerce, to develop recommendations for a new subsistence management

scheme that will protect the traditional subsistence way of life of Alaska Natives and other rural residents, and that will ensure full participation of Alaska Natives in the management scheme; and

3. Seek to replace the Federal Subsistence Board with a federally-chartered or authorized entity whose membership will be comprised of subsistence users rather than federal employees; and

4. Encourage President Obama to issue an Executive Order that advises the Federal Subsistence Board and the Office of Subsistence Management that Title VIII is Indian Legislation enacted under the plenary authority of Congress over Indian Affairs, and that directs the Federal Subsistence Board and Office of Subsistence Management to implement a subsistence management scheme or program in accordance with the Executive Order; and

5. Revoke the 2008 Memorandum of Understanding between the Federal Subsistence Board and the State of Alaska, Department of Fish and Game, and to remove the State's non-voting seat from the Federal Subsistence Board; and

6. Direct the Secretary of the Interior to fully implement his trust responsibility to Alaska Natives, Alaska Native Corporations and the federally recognized tribes, and to direct the employees within the Department of the Interior to honor this relationship; and

7. Direct the Secretary of the Interior to interpret broadly the scope of federal jurisdiction over the management of subsistence resources on public lands and reserved waters, and to extend by regulation the subsistence priority to waters that run through and adjacent to Native allotments and to waters upstream and downstream from federally reserved waters; and

8. Rescind the Federal Subsistence Board's determination that the Organized Village of Saxman; and any other Alaska Native village similarly affected, is not a rural community; and

9. Amend ANILCA to provide for Alaska Native Peoples customary and traditional hunting, fishing and gathering rights Plus Rural subsistence priority;

10. Seek legislation that provides Alaska Native Corporations the authority to opt into a provision ensuring a federally protected customary and traditional hunting and fishing right on corporation lands and associated waters for Alaska Natives associated with the ANCSA corporations, and legislation that allows for the taking of moose and other subsistence resources necessary for the potlatch and other ceremonies; and

11. Advocate for a state and federal Subsistence Support Program in rural Alaska to help offset the drastically increased cost of transportation to harvest subsistence foods; and

12. Amend the Magnuson-Stevens Fishery Conservation and Management Act to include designated voting seats on the North Pacific Fisheries Management Council for federally tribes and/or Alaska Native organizations representing rural subsistence users;

13. Fully fund co-management initiatives and infrastructure to ensure Alaska Native participation in the subsistence management process, and

14. Call for federal resources to be made available for research, protection and enhancement of subsistence resources in Alaska, and;

BE IT FINALLY RESOLVED that the delegates of the Annual Convention of the Alaska Federation of Natives hereby directs the Alaska Federation of Natives that one of the top and ongoing priorities for Alaska Federation of Natives shall be to address this resolution regarding subsistence concerns of all Alaska Natives.

SUBMITTED BY: BOARD OF DIRECTORS OF THE ALASKA FEDERATION OF NATIVES

CONVENTION ACTION: AMENDED AND PASSED



Ken Larson Testimony on

HCR 13: Governor's NPFMC Sport Fish Seat Appointments

5 PM, Thurs, 26 Jan 2012 LIO Testimony or call 1-800-463-5009

House Fisheries Committee: Chair Rep Steve Thompson Vice-Chair Rep Craig Johnson Rep Alan Austerman, Rp Bob Herron, Rp Scott Kowaski, Rp Bob Miller, Rp Lance Pruitt

THANK YOU MR CHAIRMAN AND MEMBERS OF THE FISHERIES COMMITTEE

I am Ken Larson from North Pole, Alaska, representing myself, and I have owned and operated a small Lodge and Halibut & Salmon Charter business out of Valdez & Ellamar, Alaska since 1993.

I strongly support HCR 13 requesting the governor to designate one seat each on the NPFMC to a sport fish licensee and a subsistence user. I would suggest you amend the language to clarify that the appointees be Alaskan Residents with no previous ties to the Commercial Fishing Industry.

However, since this is a House Concurrent Resolution and non-binding, I am very concerned that it will have little effect on our Governor as he, as well as previous governors have long chosen to disregard the sport fish public's, NOAA, & Dept of Commerce's requests for more equitable, non-COMFish representation on NPFMC. I would rather see this type of language be included in a Bill like HB 20 or SB 24 that will result in a Regulation or Statute requirement.

I have been here in Anchorage all week attending the annual IPHC meeting that will lower 2012 COMFish Halibut Catch Limits to about 33.1 Mlbs, down about 19.3% from the 41.1 Mlbs in 2011. IPHC Scientists are quite concerned that this will not be enough to stem the declining Exploitable BioMass health of the fishery, especially in view of the large By-Catch and Wastage of Halibut in the COMFish Trawl & Longline fleets. The annual By-Catch and Wastage has averaged 13-14 Mlbs/year since at least 2000 and is estimated to be over 10 Mlbs for 2011. For comparison purposes Halibut Sport and Subsistence users caught an estimated 7.5 Mlbs in 2011. Guided Charter fishermen in 2011 caught 388 klbs in SE and 2.84 Mlbs in South Central, substantially under NPFMC's GHL mandate, and their 2012 catch is expected to drop even more. There is not much action contemplated by the COMFish-dominated regulatory agencies to curb the excessive Trawler By-Catch and Wastage problems and it's even starting to concern the Long Liners.

As a result, any help that you can offer on achieving more equitable representation on the governing boards will be appreciated. Thank You

HCR13

From: Melvin Grove (mbgrove@mtaonline.net)
Sent: Thu 1/26/12 4:35 PM
To: KenHotMail Larson (larson_ken@hotmail.com)

Dear Senators, I urge you to attach HCR13 to SB24 and make it a state requirement that the governor pick a sport fishing and subsistence user to the NPMFC. Why? Because when you allow the fox in the hen house you soon lose all egg production and quickly run out of hens. Sound familiar? If you haven't noticed the latest reports, one of our greatest state resources is suffering from a dramatic decline. The irrespective over estimates of halibut abundance allow the commercial sector to over harvest a public resource and we're now seeing a dramatic decline in the average size and harvestable biomass. I believe this has occurred for the same reason you loose hens and eggs. The fox has been eating well, while the farmer's family goes hungry. It's time for the state to put a lock on the hen house door and select more people on the council to act as watch dogs.



TAKING STOCK





OF THE

REGIONAL FISHERY MANAGEMENT COUNCILS









JOSH EAGLE
SARAH NEWKIRK
BARTON H. THOMPSON JR.

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NOTES ON TERMINOLOGY

In recent years, NMFS has begun to call itself NOAA Fisheries. In this report we refer to the agency by its official name of National Marine Fisheries Service, or NMFS.

Congress has amended what is now known as the Magnuson-Stevens Fishery Conservation and Management Act several times since passing it in 1976. In addition, Congress has also twice renamed the law. The law was originally known as the Fishery Conservation and Management Act (or FCMA). Later, in recognition of the contributions of Senator Warren Magnuson, Congress renamed the statute the Magnuson Fishery Conservation and Management Act. In 1996, recognizing the many contributions of Senator Ted Stevens, Congress gave the law its current name. For purposes of simplicity, we generally refer to the law in this report as the "Magnuson-Stevens Act" except when it is used in the context of historical events.

EXECUTIVE SUMMARY

Over a third of the nation's fish stocks currently are overfished (not counting those stocks for which the government has inadequate information to judge their status). These stocks historically supported some of America's most important fisheries: cod, salmon, rockfish, tuna, red snapper, lobster, and blue crab, to list only a few. An essential step in helping these stocks recover is to end the overfishing that has contributed to these fisheries' decline. But overfishing is still occurring in over half of these fisheries.

Few Americans know who manages the nation's fisheries or how management decisions are made. Eight regional fishery management councils play the major role in developing management plans and supporting regulations for each of the coastal fisheries in need of conservation. The Magnuson-Stevens Fishery Management and Conservation Act ("Magnuson-Stevens Act"), which is the main national law in the fisheries field, sets out standards and guidelines for the management plans but leaves the councils with significant discretion in implementing the standards and guidelines. Although the National Marine Fisheries Service (NMFS) within the U.S. Department of Commerce has oversight authority over the regional councils, NMFS in practice seldom rejects the councils' decisions.

This study, which was initiated and supported by The Pew Charitable Trusts, looks in detail at the mandates, constitution, rules, and procedures of the regional councils to determine whether the councils can effectively manage the nation's fisheries. To gain a detailed picture of the councils, we surveyed members of the four councils that manage the country's four most important fishing regions (obtaining a greater than 50 percent response rate), studied in depth how each council resolved a major fishing management issue, and obtained relevant information from NMFS regarding the councils, including the financial interests of council members. We then measured the councils against the standards for "good governance" found in congressional statutes regulating federal agencies, state fish and game laws, and relevant studies and analyses by political scientists and organizational experts.



Based on this study, we conclude that the councils are unlikely to solve the current problems facing the nation's fisheries for at least three principal reasons. First, the councils have two major responsibilities that, in practice, are in conflict. The councils must limit the number of fish that can be caught to ensure their conservation while also allocating the allowable catch among members of the industry. Because allocating a limited catch among diverse fishing interests is not politically easy, councils face significant pressure to increase the size of fishery quotas and thus the amount of fishing rights that can be apportioned. One of the



easiest ways to reduce the pain of allocating a catch, in short, is to raise the size of the catch — to the detriment of conservation.

Second, the highly homogeneous membership of the councils fails to bring diverse viewpoints to council discussions and decision-making. Prior studies show that groups with diverse viewpoints look at broader information and generally make better decisions. For this reason, Congress requires federal advisory commissions to be "fairly balanced in terms of points of view represented and the functions to be performed by the advisory commission." The councils, however, are not subject to the Federal Advisory Committee Act, and in each year since 1985 approximately 80 to 90 percent of appointed council members have represented fishing interests. By contrast, national conservation organizations currently have a representative on only one of the councils. Although state fishery officials and a representative of NMFS also sit on each council, fishing interests still hold a majority of seats on most councils, and the imbalance in council perspectives undercuts effective and creative problem solving.



Finally, council members often face significant potential conflicts of interest in their deliberations and decision-making. For over a century, federal and state governments have prevented regulatory officials from participating in decisions in which they have a conflict of interest. As legislatures have recognized, conflicts of interest can undermine the American commitment to equal treatment of equal claims and undercut effective regulation; even the appearance of a conflict of interest can undermine the integrity of the regulatory process and public confidence in regulatory institutions. The councils, however, are again exempt from the general federal conflict-of-interest standard, and 60 percent of appointed council members have a direct financial interest in the fisheries that they manage and regulate.

Many of the council members whom we surveyed agreed that there are problems with the current system and that these problems should be addressed. More than half of the surveyed council members, for example, reported that environmental interests are underrepresented on the councils. Approximately a third of the respondents also reported that they had felt it unfair in one or more past instances for a fellow council member to participate in a decision in which he or she had a financial interest in the outcome. A similar percentage expressed concern about decisions in which the relatives or friends of voting council members had a financial interest in the outcome.

These are not the only problems undermining the councils' ability to restore and protect the nation's fisheries, although they are the most serious. The complex and decen-



tralized system of council decision-making, for example, also discourages broad national participation in deliberations concerning fisheries management. Council members, moreover, generally lack the time and resources needed to master the complex issues before them. Finally, the split in responsibilities between the councils and NMFS removes effective accountability for the status of the nation's fisheries.

Congress did not give careful thought to optimal management institutions when it created the council system in 1976 as part of the original Magnuson-Stevens Act. At the time, Congress was concerned first and foremost with the perception that foreign fishing fleets were catching too many fish off American shores. Thus, the primary purpose of the act was to keep foreign boats out, while providing incentives for U.S. citizens to invest heavily in replacement vessels. In the 1,200-page legislative history of the act, there are only a handful of references to the council system. There are no discussions of any alternatives, no evaluations of the potential advantages and disadvantages of the council system, no studies of whether the council system would be effective at conservation.

Thirty years of experience with the council system suggests that reform is now needed. Although NMFS and the Secretary of Commerce could help to improve council decision-making by working to ensure greater diversity in council appointments and by tightening current conflict-of-interest regulations, only Congress can provide substantial reform. Council representation and conflicts of interest are two important areas for congressional attention. To ensure the future health of the nation's fisheries, however, Congress should separate the institutional responsibilities for conservation and allocation. Conservation is a national concern and should be the responsibility of a national regulatory body that is subject to the standard rules of good governance and that has both significant scientific expertise and adequate resources. The councils, with their greater local expertise, should remain responsible for allocative decisions within the scope of the national management plan.



Introduction

A significant fraction of American fisheries are in trouble. According to the federal government, over a third of the nation's known coastal fish stocks are currently "overfished," and almost a quarter are experiencing "overfishing." Twenty percent are both overfished and suffering from overfishing. These troubled stocks include what were once some of the most valuable recreational and commercial fisheries in the United States: cod in New England, flounder in the mid-Atlantic region, snappers and red drum in the Gulf of Mexico, and rockfish off the Pacific coast. The problems have persisted for nearly three decades despite improved laws and the investment of billions of federal dollars in fishery science.

Although multiple factors have contributed to these problems, the composition and rules of the eight regional fishery management councils ("regional councils") that are responsible for regulating the nation's coastal fisheries make effective regulation difficult. The regional councils face immense pressure to permit some or all segments of the fishing industry to catch more fish. Yet fishing interests dominate the councils, robbing the councils of the diverse and robust perspectives needed to withstand pressures and make wise but controversial decisions. The general public plays little role in fishery management. Council members, moreover, face frequent conflicts of interest but are seldom required to recuse themselves. Although scientific uncertainty makes fishery regulation innately difficult, the councils are poorly designed to deal with the difficult problems facing fishery management.

The institutions that regulate our nation's public resources are as important as the substantive laws that say how those resources should be managed. Even highly specific laws leave regulators with significant discretion. Legislatures cannot predict and address every issue, and they often need to delegate individual management decisions to the expertise of the regulators. The identity of the regulators and the procedures and safeguards that govern their work therefore often determine the effectiveness of the regulatory system.

The U.S. Congress over the years has drawn up a number of general laws designed to promote beneficial regulation by ensuring objective officials, open public participation, and transparency in decision-making. As early as 1863, Congress barred governmental officers or agents from participating in governmental decisions that could benefit them financially.[1] Under the Administrative Procedure Act of 1946, Congress mandated that federal agencies explain their decisions and provide the public with ample opportunity to comment.[2] In 1972, Congress tried to ensure balanced and public input from advisory boards through the Federal Advisory Committee Act.[3] These and similar laws collectively reflect broadly agreed-upon principles of "good government" — broad representation of interest groups, no conflict of interest, and open and active public participation.

Yet the regional councils that regulate fisheries in the waters off the coasts of the United States are exempt from a number of these laws, in part because they technically are not federal agencies. The regional councils are among the most obscure regulatory bodies in the United States. Although virtually everyone knows that the U.S. Environmental Protection Agency protects the country's air and water quality and that the USDA Forest Service manages the country's public forests, few people have ever even heard of the regional councils. Yet the regional councils collectively manage a geographic region larger than the continental United States. And they are responsible for the health of a $25 billion commercial

fishing industry and an even larger recreational fishing industry. Perhaps most importantly, the regional councils are the trustees for some of the most extensive and important resources held by the American public — the hundreds of species of marine fish that live in the country's coastal waters, and the ecosystems that they inhabit.

The Magnuson-Stevens Fishery Conservation and Management Act (commonly referred to today as the "Magnuson-Stevens Act") divides the jurisdictional waters off the coast of the United States into eight regions, each managed by a separate regional council[4] (see Box 1). The regional councils prepare fishery management plans for the fish stocks in their regions, subject to oversight by the National Marine Fisheries Service (NMFS) in the U.S. Department of Commerce. The voting members of each council consist of state fisheries officials, various appointed members (most of whom are themselves members of the fishing industry that the councils regulate), and a single representative of the federal government.

As discussed later in this report, four key problems plague the councils. First, by asking councils to decide both how many fish can be caught and how this catch should be allocated among fishermen, the Magnuson-Stevens Act has undermined the odds of effective conservation. The pressure to avoid tough allocation choices encourages councils to shortchange conservation and allow larger catches. Second, councils are dominated by the fishing industry and, as a result, do not enjoy the breadth and robustness of perspectives important for good decision-making. Third, council members who represent the fishing industry face frequent conflicts of interest, which threaten to undermine both balanced decision-making and the public's confidence in the councils. Finally, although NMFS oversees the councils' decisions, its oversight has been deferential and thus not an adequate answer to the concerns regarding the councils' decision-making.

Our survey of members of four regional councils supports these findings. Nearly all of the council members we surveyed reported flaws in the system, and many respondents pointed to one or more of these four key problems.

KEY FINDINGS:

We identify four reasons why the regional councils are not able to effectively regulate coastal fisheries:

- The councils decide both how many fish can be caught and who can catch them. Because larger catches are easier to divide up among competing fishery interests, the councils' responsibility to allocate catches encourages them to set lax fishery limits, undermining conservation.
- More than 80 percent of the citizens who are appointed to the councils by the Secretary of Commerce represent the fishing industry. Homogeneous groups are less likely to produce well-considered decisions than groups with diverse membership.
- The large number of council members drawn from industry results in ubiquitous conflicts of interest. Yet the conflict of interest rules that apply to the councils are very weak compared to those that apply to other government decision-makers.
- Despite its legal responsibility to carefully oversee the councils, NMFS gives them significant leeway in decision-making.

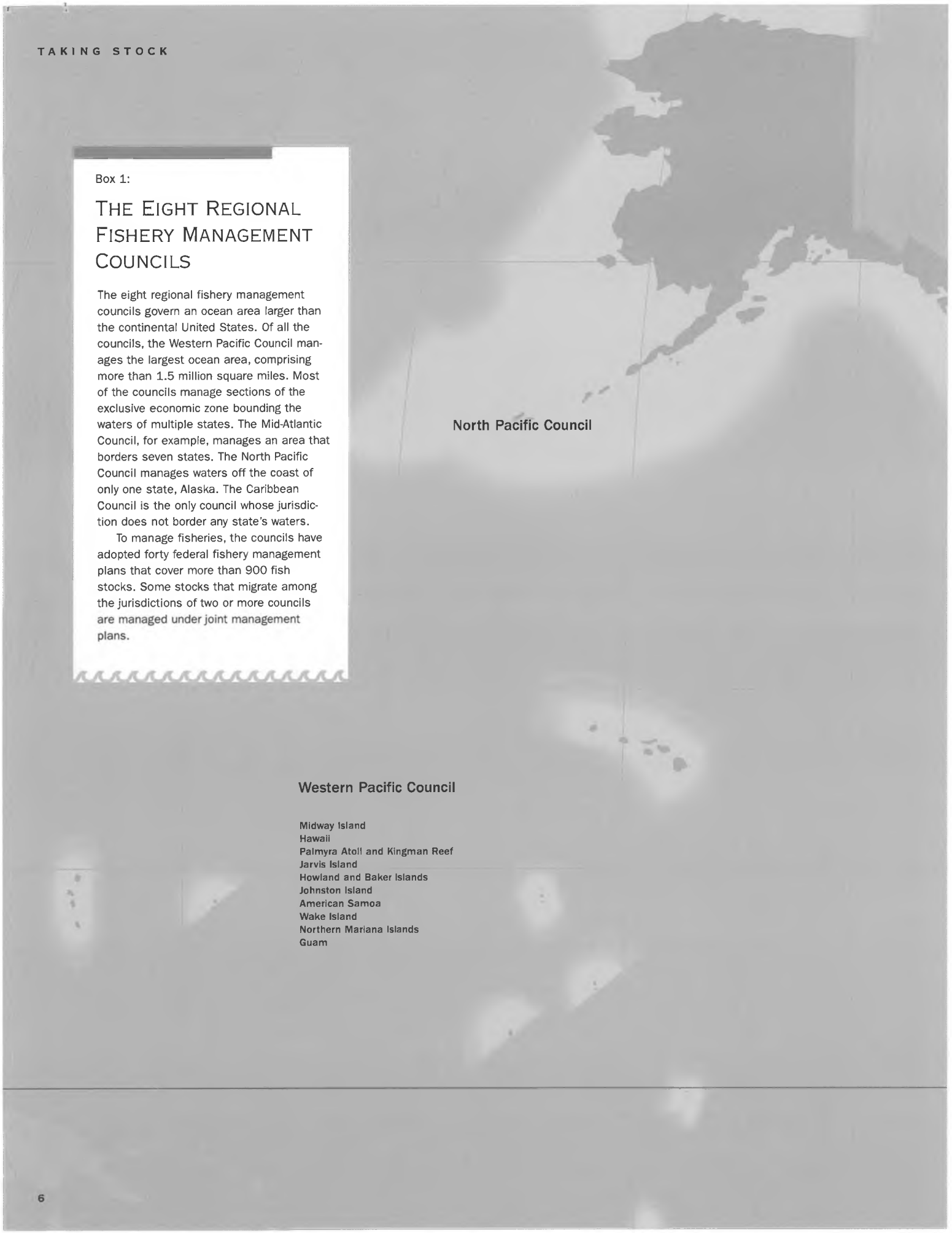


Box 1:

The Eight Regional Fishery Management Councils

The eight regional fishery management councils govern an ocean area larger than the continental United States. Of all the councils, the Western Pacific Council manages the largest ocean area, comprising more than 1.5 million square miles. Most of the councils manage sections of the exclusive economic zone bounding the waters of multiple states. The Mid-Atlantic Council, for example, manages an area that borders seven states. The North Pacific Council manages waters off the coast of only one state, Alaska. The Caribbean Council is the only council whose jurisdiction does not border any state's waters.

To manage fisheries, the councils have adopted forty federal fishery management plans that cover more than 900 fish stocks. Some stocks that migrate among the jurisdictions of two or more councils are managed under joint management plans.




New England Council
Mid-Atlantic Council
Pacific Council
South Atlantic Council
Gulf of Mexico Council
Caribbean Council
Puerto Rico and U.S. Virgin Islands





A Brief History of Fishery Management in the United States

Direct federal management of the nation's marine fisheries is of relatively recent vintage. Until 1976, states primarily managed the fisheries off the coast of the United States and only to a distance of 3 miles, the extent of their jurisdictional waters. Beyond that narrow border of state waters, fisheries were subject to a "tragedy of the commons" as fishing vessels of multiple nations raced to catch stocks of fish before other nations' vessels fished out the stocks. Congress attempted to change this in 1976 by declaring a fishery conservation zone (FCZ) extending out 200 nautical miles and by establishing a federal system for regulating fisheries in the region between the 3-mile state waters and the end of the FCZ (now known as the exclusive economic zone, or EEZ).[5] A brief history of the state management of coastal fisheries, however, helps in understanding the current regional councils and their shortcomings.

STATE FISHERY REGULATION: THE STATE COMMISSIONS

In the early 1800s, U.S. marine fisheries were regulated by the states under a hodgepodge of laws restricting fishing gear and by the federal government under trade and ship-licensing laws. Beginning in the late nineteenth century, most states created special commissions to oversee the management of fisheries, including marine fisheries where the states had coastal waters. Indeed, a number of state constitutions mandate the use of fishery commissions. In most cases, the same commission also manages terrestrial wildlife.

In line with the progressive efforts of the late nineteenth and early twentieth centuries, many of these constitutional provisions attempt to ensure that the commissions have the necessary expertise and broad public perspectives to regulate fisheries wisely. Most states require that gubernatorial appointments to the commissions be confirmed by the state senate, and several states require that appointments include members of different political parties.[6] Louisiana's constitution provides that, although three of the seven commission members must be coastal residents who are "representatives of the commercial fishing and fur industries," the other four must be "electors from the state at large *other than* representatives of the commercial fishing and fur industries."[7] State law provides that the Nevada Board of Wildlife Commissioners must include a rancher, a farmer, a person "actively engaged" in wildlife conservation, and a member "who represents the general interests of the public."[8] The Tennessee Wildlife Resources Commission is required to have at least one member older than sixty years of age, two women, and one "member of a racial minority."[9]

A number of states also explicitly require commission members to have expertise in relevant scientific disciplines or in the management of fish and wildlife.[10] Arkansas requires its commission to include the head of zoology at the University of Arkansas.[11] Indiana's Natural Resources Commission includes the president of the Indiana Academy of Science.[12]

The history of the Alaska Board of Fisheries sheds valuable light on the importance of the membership and organization of fishery management agencies. Before Alaska entered the Union as the forty-ninth state in 1959, the federal government managed local fish stocks through the U.S. Department of the Interior. In anticipation of statehood, Alaska's legislature created the seven-member Alaska Fish and Game Commission, and the governor appointed to the commission three commercial fishermen, a sports fisherman, a [fish] processor, a hunter, and a trapper.[13] Congress was sufficient-

ly concerned whether a board consisting entirely of fishermen, processors, and hunters could effectively manage Alaska's fish and game that it conditioned the handing over of regulatory authority on Alaska's correcting the imbalance. In the Alaska Statehood Act of 1958, Congress specified that the federal government would retain management of Alaskan fisheries until "the Secretary of the Interior certifies to the Congress that the Alaska State Legislature has made adequate provision for the administration, management, and conservation of said resources in the broad national interest."[14]

In response to Congress' concern, the Alaska legislature replaced the commission with a Board of Fish and Game to be composed of seven members "having a general knowledge of the fish and game resources of the State and selected without regard to political affiliation or special interest."[15] In 1960, the Secretary of the Interior certified this change, and President Eisenhower transferred regulatory authority to Alaska in 1960. Although separate boards of fisheries and game have since replaced the Board of Fish and Game, Alaska law continues to mandate broad public representation on the boards. Alaska law instructs the governor to "appoint each member on the basis of interest in public affairs, good judgment, knowledge, and ability in the field of action of the board, and with a view to providing diversity of interest and points of view in the membership."[16]

EARLY FEDERAL REGULATION OF FISHERIES

The federal government first became involved in fishery management in 1870 with the formation of the U.S. Commission on Fish and Fisheries. A year later, Congress instructed the new commission to find out "whether any... diminution of the number of food-fishes of the coast and the lakes of the United States has taken place; and, if so, to what causes the same is due; and whether any and what protective, prohibitory, or precautionary measures should be adopted."[17] Recognizing that the qualifications of the decision-maker are important, Congress also charged that the commissioner of fish and fisheries should be a civil officer or employee of the government with "proved scientific and practical acquaintance with the fishes of the coast." In the preamble to this legislation, Congress cited worries that "the most valuable food fishes of the coast and the lakes of the United States are rapidly diminishing in number." Management of coastal fisheries, however, remained with the states, and the commission itself focused most of its attention on discovering new stocks of fish, developing innovative fishing technology, and promoting fish sales.[18]

The commission underwent multiple transformations over the next century. The commission moved to the Department of Commerce in 1903, becoming the U.S. Bureau of Fisheries. Then, in 1939, the bureau moved to the Department of the Interior, where it subsequently became a division of the new U.S. Fish and Wildlife Service. In deciding that the bureau should be relocated, President Franklin Roosevelt noted that the bureau dealt with "conservation and utilization of the [aquatic] wildlife resources of the country" and thus should be part of the Department of the Interior, the federal agency that "is directly responsible for the administration and conservation of the public domain."[19] Throughout these various moves, however, the bureau's focus remained on research designed to increase the economic wealth of the fishing industry. To most people, the ocean continued to look ripe for exploitation.









In 1966, Congress established a bipartisan Commission on Science, Engineering, and Resources, popularly known as the Stratton Commission, to "formulate a comprehensive, long-term, national program for marine affairs designed to meet present and future national needs in the most effective possible manner."[20] The commission issued its report, titled *Our Nation and the Sea: A Plan for National Action*, in 1969. The commission recommended forming a new federal agency with cabinet-level status that would enjoy comprehensive management authority over the nation's oceans. Although the commission was willing for states to continue to be the principal managers of coastal fisheries, it proposed that the new federal agency "be authorized to assume regulatory jurisdiction over endangered fisheries if the States fail to take necessary conservation measures."[21]

The Stratton Commission emphasized that a "new, strong Federal focus for marine activity is essential to a national ocean effort." While noting the value of maximizing the productive use of the nation's fisheries, the commission warned that "there are biological limits on the productivity of individual stocks of fish and shellfish" and that "[s]ensible fisheries management must prevent overexploitation of heavily utilized species." The commission recognized the political realities that had undermined effective conservation by the states in the past. First, "fishing communities form the constituencies of important elements in State legislatures" and "their desire to maintain the status quo has a strong influence on fishing legislation and on regulations of State agencies." Second, the desire to protect fishermen from cutbacks clashes with the need to limit catch. The dearth of progressive fishing management, according to the commission, reflected "the pressures on the States to find some way to limit the take from exploited fisheries without excluding any of the participants."

President Richard Nixon responded to the Stratton Commission by creating the National Oceanic and Atmospheric Administration (NOAA) in the Department of Commerce, rather than a separate cabinet-level agency.[22] He also moved federal fishery management from the Department of the Interior to the new National Marine Fisheries Service in NOAA. In its early years, NMFS focused on using grants and technical assistance to encourage and help states to develop more effective management plans for coastal fish stocks.[23]

THE BIRTH OF THE FEDERAL COUNCIL SYSTEM

The regional councils date to 1977 and passage that year of the Fishery Conservation and Management Act of 1976 (FCMA). In the FCMA, Congress declared a 200-mile FCZ off the nation's coasts and established a management system for the fisheries in the newly claimed U.S. waters. The FCMA created the eight regional councils that still govern federal waters today and awarded them primary responsibility for managing the fisheries in their jurisdictions. Most of the congressional debate centered on the legality and wisdom of establishing unilaterally a 200-mile FCZ. Management issues, and in particular the structure and makeup of the new regional councils, received scant congressional attention or thought.[24] Congress invented the councils without any prior study or discussion of alternatives and without any analysis of the possible advantages and disadvantages of such a system. There were no similarly structured natural resource management systems in place at the time. And, as Box 2 points out, the system has not been widely emulated since it was created.

The regional council system represented a compromise, forged in the FCMA, between those members of Congress who wanted federal control over fishery management and those

who favored retaining state primacy. Congress gave the states tremendous say in council membership. Except for one representative of NMFS, voting members would be state representatives or members appointed on the recommendation of state governors (or, in the case of the Pacific Council, a tribal representative). NMFS, however, would review and approve the fishery management plans (FMPs) adopted by each council and, in limited settings, write its own management plan. The FCMA also gave NMFS responsibility for enforcing the management plan. In reporting on the legislation, the Senate Commerce Committee described the relationship between the councils and NMFS as one between legislative and executive branches:

> The regional Councils are, in concept, intended to be similar to a legislative branch of government. The Councils are afforded a reasonable measure of independence and authority and are designed to maintain a close relation with those at the most local level interested in and affected by fisheries management. The Secretary of Commerce is given authority under the bill to act as the "executive," with ultimate authority to make decisions about management regulations for the entire nation. However, the Secretary's responsibility is by no means intended to be plenary. His duties will be to insure that the Councils are properly constituted; that they operate according to the procedures set forth in the Act; that the management regulations which the Councils recommend are compatible with the national management conservation standards; that such regulations do not conflict with any provision of this Act or other applicable law; and generally that the Councils abide by this Act.[25]

As indicated in this and other portions of the act's legislative history, Congress did not intend for NMFS to play a strong role in the formulation of management plans or conservation measures. The act effectively limits NMFS' responsibilities to providing the councils with scientific and economic information, making sure that the councils do not exceed their broad legal authority, and implementing and enforcing the plans and measures written by the councils. Moreover, as discussed later in this report, NMFS generally has not attempted to override the decisions of the councils.

Box 2:

How Do Other Countries Regulate Fisheries?



No nation gives its fishing industry as much authority to make large-scale decisions about fisheries conservation and management as the regional councils enjoy. In most other countries, fishermen play important but advisory roles. Governmental agencies have the final decision-making authority. This is true even in countries such as Iceland, where fishermen make up more than 10 percent of the country's workforce, and Norway, where fisheries make a tenfold greater contribution to gross domestic product than they do in the United States.

In a 1997 study, *Towards Sustainable Fisheries*, the Organization for Economic Cooperation and Development described the roles that fishermen play in various countries' fishery management systems. In most of the twelve countries surveyed, and in the European Union, legislation limits fishermen to a consultative role. Finland, Iceland, Denmark, Norway, France, and New Zealand are all examples of this kind of system. Governments give fishermen, and other interested members of the public, seats on boards that advise agencies on conservation and management measures. But the agencies are the decision-makers.

Only a few countries have systems in which fishermen are given responsibility anywhere close to the authority they exercise under the council system. Australia's Fisheries Management and Administration Acts of 1991, for example, created a structure similar to that created by the Magnuson-Stevens Act. The federal agency, the Australian Fisheries Management Authority, delegates substantial authority to twelve management advisory committees that are predominantly composed of fishing industry members. The results of this system to date are not encouraging. In 1992, the Australian government classified 25 percent of known stocks as overfished. Today, it reports that 50 percent of the known stocks are overfished.

THE REGIONAL COUNCILS

VOTING MEMBERSHIP

Each of the eight regional fishery management councils consists of seven to twenty-one voting members, including both appointed members and mandatory governmental members (see Box 3). The mandatory governmental members are the regional NMFS administrator and the "principal State official," or his or her designee, with "marine fishery management responsibility" in each of a council's constituent states.[26] The regional NMFS administrator is the only voting representative of the federal government on each council. In those regions where NMFS has two regional administrators, NMFS must choose one of the two to serve on the council. Other federal officials, including representatives of the U.S. Coast Guard, the U.S. Fish and Wildlife Service, and the U.S. Department of State, sit on the councils but only as nonvoting members.

The Secretary of Commerce appoints additional voting members to each council from candidates nominated by the governors of each of the council's constituent states. These appointed members make up a majority of every council's voting members. In three of the councils (Gulf, New England, and Pacific), appointed members constitute almost two-thirds of the voting members. Under the original Senate bill, the president would have made the appointments, with the advice and consent of the United States Senate, from lists submitted by the governors. Senator Warren Magnuson considered this approval process to be an important part of "balanc[ing] the national perspective with that of the individual States."[27] The final act, however, favored the less time-consuming approach of having the secretary of commerce make the appointments.

Councils must have at least one appointed member from each constituent state (and, in the case of the Pacific Council, from a local fishing tribe). These are known as the "obligatory" members of a council. Each governor submits a list of at least three names to the secretary of commerce, who then must choose from those

Box 3:

VOTING MEMBERS OF THE PACIFIC COUNCIL

Although the makeup of the various councils varies to some degree, the Pacific Council is fairly typical of the interests and governmental agencies represented. The bulk of appointed members are drawn from the recreational and commercial fishing industries. Some of the industry members are fishermen, while others are employed by fishing industry associations. The state representatives who attend council meetings are rarely, if ever, the head of the relevant state agency. Rather, they tend to be lower-level officials who serve as designees for the agency heads.

Of the nine appointed members of the Pacific Council in June 2003, one was a commercial fisherman, two were recreational anglers, and two owned recreational fishing businesses. One appointed member worked for a commercial fishing association, while another worked for a recreational fishing association. One member worked for a seafood processing company. Finally, there was a tribal representative who worked as a fisheries manager for the Quinault Indian Nation.

At right is brief biographical information about each of the members. Except for the bracketed information concerning Chairman Radtke, this information came from the council's Web site, www.pcouncil.org.

■ **Robert Alverson**
Fishing Vessel Owners' Association
Appointed, at-large

Mr. Alverson is Manager and Executive Secretary of the Fishing Vessel Owners' Association and has held this position since 1976. He represents vessel owners who fish for Pacific halibut and sablefish with longline gear, and he operates the Seattle Fishermen's Exchange which auctions halibut, sablefish, and other groundfish.

■ **Ralph Brown**
Commercial Fisherman
Appointed, at-large

Mr. Brown is . . . from Brookings, Oregon. . . . He has many years first-hand experience in the fishing industry, including troll, pot, trawl, and processing. He is currently the President of the Fishermen's Marketing Association, a member of the Port of Brookings Harbor Commercial Fishing Advisory Committee, and a member of the Board of Directors for the Oregon Fisheries Congress.

In addition, Mr. Brown is the owner of two 75-foot trawl vessels which participate in the shrimp and groundfish fisheries.

■ **James Caito**
Calto Fisheries
Appointed, obligatory (California)

Mr. Caito, a [seafood] processor from Fort Bragg, California, is Vice-President of Caito Fisheries, Inc. and a former member of the Council's Salmon Advisory Subpanel. He is currently Chairman of the California Seafood Council, Vice-Chairman of the California Salmon Council, and a member of both the California Fisheries and Seafood Council and the National Fisheries Institute.

■ **Mark Cedergreen**
Westport Charterboat Association
Appointed, obligatory (Washington)

Mr. Cedergreen . . . participated in the commercial fisheries during the time period from 1964 through 1975, both as a crew member on crab fishing boats and with his own salmon troller. From 1976 through 1996, Mr. Cedergreen owned and operated his own Charter-boat business in Westport.

■ **Donald Hansen**
Dana Wharf Sportfishing
Appointed, at-large

Mr. Donald Hansen is . . . from Dana Point, California [and] is the Council's Vice Chairman. Mr. Hansen is a life-long participant in marine fisheries off California and has been the owner of Dana Wharf Sportfishing since 1971. He has been the Vice President of the Sportfishing Association of California since 1987 and the President of Dana Point Harbor since 1992.

names. The FCMA specifies that nominees should be "individuals who, by reason of their occupational or other experience, scientific expertise, or training, are knowledgeable regarding the conservation and management, or the commercial or recreational harvest, of the fishery resources of the geographical area concerned." Before submitting the list of nominees, the governor must, "to the extent practicable," consult with "representatives of the commercial and recreational fishing interests of the State." And, in choosing the appointees from the lists, the Secretary of Commerce must, "to the extent practicable, ensure a fair and balanced apportionment, on a rotating or other basis, of the active participants (or their representatives) in the commercial and recreational fisheries." There is no comparable requirement that any appointee represent conservation interests or the public at large.

In addition to the obligatory appointed members, each council has a number of at-large appointed members. The number of at-large members in each council varies from two (on the Caribbean Council) to six (New England and Mid-Atlantic). Although he is not obligated to do so by the FCMA, the Secretary of Commerce historically has distributed these at-large seats equitably among the states in each council region.

WORK AND RESPONSIBILITIES

The principal job of a regional council is to prepare an FMP for every fishery within its geographical jurisdiction that "requires conservation and management." The FCMA, which is now known more commonly as the Magnuson-Stevens Act, requires each FMP to contain all "conservation and management measures" that are "necessary and appropriate for the conservation and management of the fishery." To guide the councils' development of FMPs, the Magnuson-Stevens Act sets out ten "National Standards." The first standard takes precedence over all other standards and requires the adoption of conservation and management measures

"ALL YOU HAVE TO DO IS LOOK AT THE MAKEUP OF THE COUNCIL AND SEE THE CONFLICT OF INTEREST. IT'S JUST TOO EASY FOR THE POLITICAL SYSTEM TO MESS AROUND WITH THE MAKEUP. I THINK WE NEED A MORE FUNDAMENTAL CHANGE IN THE SYSTEM."

— DR. HANS RADTKE, FORMER CHAIRMAN OF THE PACIFIC COUNCIL

■ **James Harp**
Quinalt Indian Nation
Appointed, obligatory (Tribal)

Mr. Harp is the first person to be appointed to the newly-created tribal seat on the Council. . . . He served as the appointed at-large member from Washington from 1988 to 1997. Prior to his appointment as a voting Council member, Mr. Harp represented the coastal Washington tribes on the Salmon Advisory Subpanel from 1984 to 1988. Mr. Harp holds the position of Fisheries Manager for the Quinault Indian Nation based in Taholah, Washington.

■ **David Ortmann**
Appointed, obligatory (Idaho)

Mr. David W. Ortmann [is] a fishery biologist and recreational angler from Coeur d'Alene, Idaho. He served briefly with California Department of Fish and Game and retired from Idaho Department of Fish and Game in 1995. He has been an avid recreational angler since the age of eight and is the author of more than 50 technical fisheries research and management reports.

■ **Hans Radtke**
Appointed, obligatory (Oregon)

Dr. Radtke is . . . from Oregon, residing in Yachats. . . . Dr. Radtke is a sport fisher and a freelance economist specializing in the relationship between resource-based industries of the Pacific Northwest and regional, state, and national economies. He has worked on a variety of projects, including impact analyses of fishery management alternatives for the Oregon Department of Fish and Wildlife and the Council. [Until June 2003, Dr. Radtke served as chairman of the Pacific Council. However, Dr. Radtke was not reappointed. At that time, he issued a statement regarding the council system. "All you have to do is look at the makeup of the Council and see the conflict of interest," he said. "It's just too easy for the political system to mess around with the makeup. I think we need a more fundamental change in the system."]

■ **Roger Thomas**
Golden Gate Fishermen's Association
Appointed, at-large

Mr. Thomas is . . . from California. He has been a commercial passenger fishing vessel owner/operator since 1968, fishing primarily for salmon. He is the President of the Golden Gate Fishermen's Association.

■ **Phil Anderson**
Washington Department of Fish and Wildlife
Mandatory

Mr. Anderson is the designee for Dr. Jeffery Koenings, the director of the Washington Department of Fish and Wildlife. Mr. Anderson joined the Department in 1994. . . . Prior to this position, he was the appointed obligatory Council member from Washington from 1987 to 1994 and served as Vice-Chairman and Chairman during that time. From 1970 to 1994, he was a charter fishing vessel owner/operator and participated in the recreational fisheries for salmon, halibut, groundfish, and albacore. Among other past activities, he was President of the Washington State Charter Boat Association.

■ **Neal Coenen**
Oregon Department of Fish and Wildlife
Mandatory

Mr. Coenen is the principal designee for Mr. Lindsay Ball, director of the Oregon Department of Fish and Wildlife. (Full bio not available at this time.)

■ **Svein Fougner**
National Marine Fisheries Service
Mandatory

Mr. Fougner is the designee for Mr. Rod McInnis, Acting Regional Administrator of the National Marine Fisheries Service Southwest Region. Mr. Fougner has worked for National Marine Fisheries Service since 1975 and has been the Assistant Regional Administrator for Sustainable Fisheries in the Southwest Region since 1998.

■ **Eric Larson**
California Department of Fish and Game
Mandatory

Mr. Larson represents Mr. Robert C. Hight, Director of the California Department of Fish and Game. (Full bio not available.)

■ **Jerry Mallet**
Idaho Fish and Game
Mandatory

Mr. Mallet is Idaho Fish [and] Game Director Steve Huffaker's designee to the Council. He is a retired Assistant Director for the department. Mr. Mallet served the department from 1956 to 2000.

THE COUNCILS ENJOY SIGNIFICANT DISCRETION IN WRITING FISHERY MANAGEMENT PLANS.

to "prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the United States fishing industry." Other important provisions of the law require councils to use the "best scientific information available," to reduce bycatch and bycatch mortality, and to protect essential fish habitat. FMP provisions also must minimize costs "where practicable" and take into account the economic interests of fishing communities, but only to the extent "consistent with the conservation requirements of this Act (including the prevention of overfishing and rebuilding of overfished stocks)." The Magnuson-Stevens Act thus provides a limited role for economics, but not at the cost of avoiding overfishing and ensuring the continuing optimum yield of each fishery.[28]

The councils have significant discretion in determining the annual "optimum yield" of a fishery. The Magnuson-Stevens Act establishes a ceiling for the optimum yield but provides little additional guidance. Under the act, optimum yield cannot exceed the "maximum sustainable yield" (MSY) of a fishery. A fishery's MSY is that amount of fish that a stock will "produce" annually when it is at its most productive size. Although often debated, theories developed by fishery science hold that a fish stock will produce its MSY when the population is somewhere between 40 and 60 percent of its pre-fishing level.[29] A council is free to reduce optimum yield below MSY if such a reduction can be justified on the basis of "any relevant economic, social, or ecological factor." However, a council cannot reduce optimum yield to zero based on consideration of these factors, unless it can show that refraining from fishing a species will provide "the greatest overall benefit to the nation."[30]

Councils enjoy additional discretion as a result of the scientific uncertainty involved in estimating fish populations and safe catch levels (see Box 4). Scientists have a very difficult time identifying with precision exactly what the MSY of a fishery is. NOAA scientists, who advise the councils on such matters, thus almost always present the councils with a range of possible MSYs. For example, scientists might tell a council that there is an 80 percent chance that the MSY is between 10 and 25 million pounds annually. This spread provides a council with a large amount of discretion. The council may choose to "set" the MSY of the fishery at any level between 10 million and 25 million pounds. The combination of this scientific discretion and the legal discretion in the Magnuson-Stevens Act gives the councils significant latitude, power, and responsibility.

NMFS must review and approve all FMPs and amendments to the plans. Councils submit their plans or amendments to NMFS, after which there is a sixty-day public comment period. Within thirty days after the comment period closes, NMFS must approve, disapprove, or partially approve the plan or amendment. If NMFS does not act within this period, the plan or amendment automatically goes into effect. If NMFS disapproves or partially approves a plan, the council can submit a revised plan or amendment. During the time that a council is revising a disapproved plan, the status quo established by prior regulations remains in effect. NMFS cannot prepare and adopt its own FMP unless the council does not revise its plan or amendment (or fails to prepare any plan for a fishery that requires conservation and management). Even then, NMFS must ask for the council's views before finalizing the federal FMP and can never unilaterally create a plan that restricts the number of fishermen who can participate in a fishery.[31]

When a council submits an FMP to NMFS for review and approval, the council also submits proposed regulations implementing the plan. Councils can propose modifications to the regulations at any time. Although NMFS must review the proposals before promulgating the final federal regulations implementing the FMP, NMFS again enjoys only very limited authority to revise the regulations on its own. Once final regulations are in place, the federal government through NMFS and the Coast Guard implements and enforces the regulations.

In response to growing concerns regarding the health of the nation's fisheries, Congress in 1996 added provisions to the Magnuson-Stevens Act designed to rebuild overfished fisheries. Congress specified that FMPs must pro-

FIGURE A: MANAGEMENT OF THE KING MACKEREL FISHERY, 1985–1999

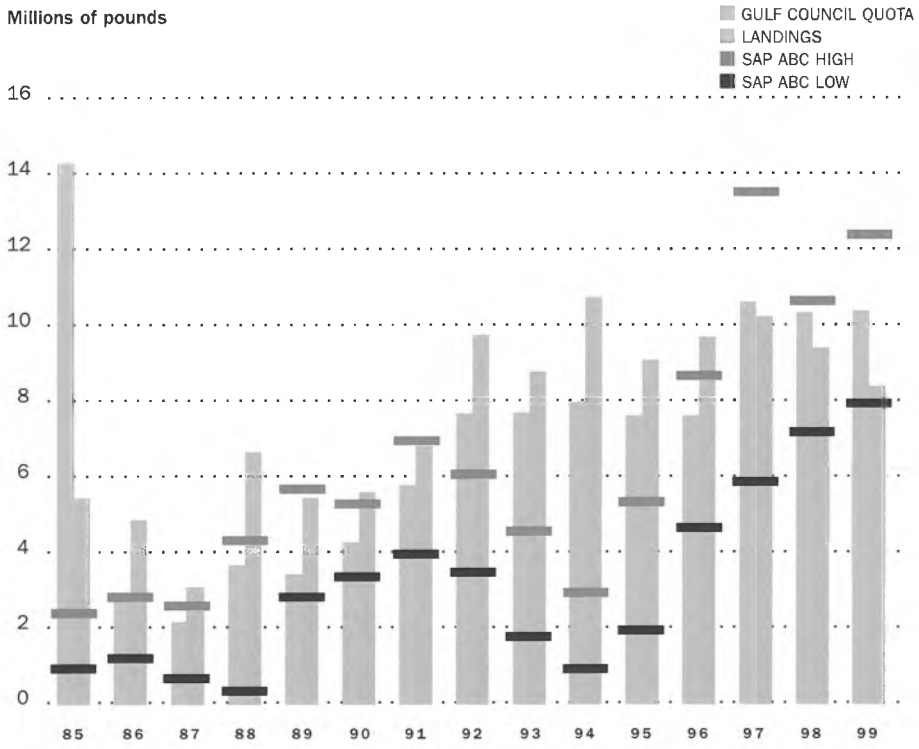
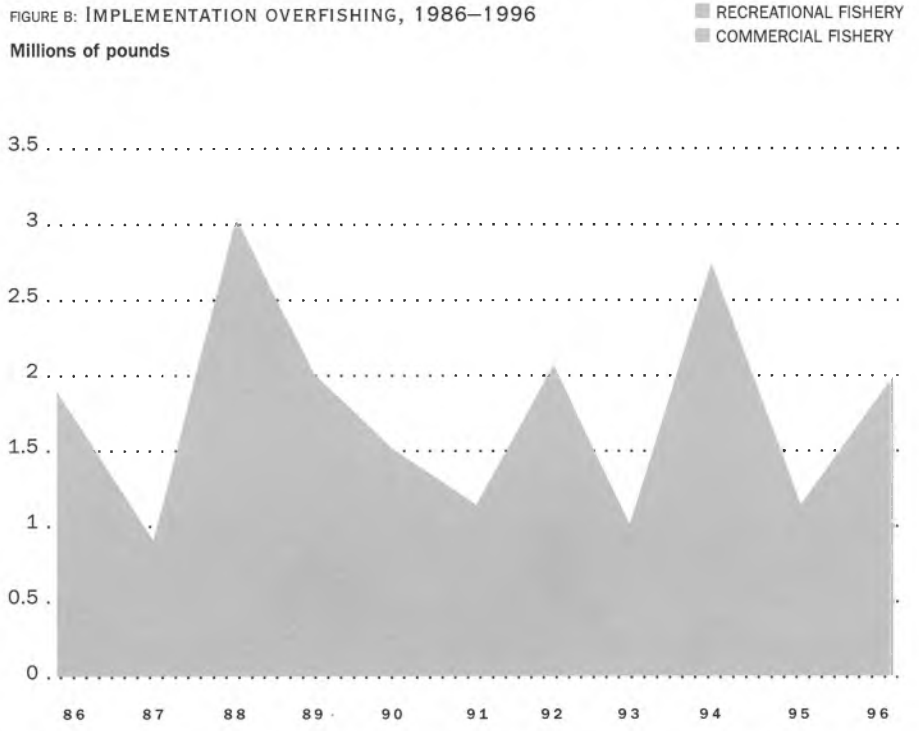


FIGURE B: IMPLEMENTATION OVERFISHING, 1986–1996



Box 4:

SCIENTIFIC UNCERTAINTY AND COUNCIL DISCRETION

The Magnuson-Stevens Act requires the regional councils to use the "best scientific information available" in making their management decisions. An examination of several case histories, however, shows that councils sometimes ignore the recommendations of fishery scientists. More importantly, the uncertainty inherent in scientists' estimates of appropriate catch levels gives the councils significant discretion in setting quotas and other management measures. Councils often use this discretion to set lax quotas and management measures that are unlikely in the long run to achieve the Magnuson-Stevens Act's objectives.

In an earlier paper, two of the authors of this report examined the use of scientific recommendations in the Gulf Council's management of king mackerel and the Pacific Council's management of widow rockfish.* Both councils occasionally chose quotas that were higher than the allowable biological catch (ABC) range recommended by NMFS scientists. More importantly, rather than choosing a quota in the middle of the recommended range, the councils almost always chose quotas that were at or near the top of the range, making effective management unlikely.

Figure A, for example, shows the quotas and landings for Gulf king mackerel compared with the range recommended by the NMFS stock assessment panel (SAP). As can be seen, the Gulf Council set quotas that were above the recommended range in five years (1985 and 1992–1995). The council set the quota at or below the midpoint of the range only in 1989 and 1990. In all other years, the council set a quota that exceeded, often by significant amounts, the midpoint recommendation.

As Figure A illustrates, setting a high quota within the recommended range makes it very likely that the actual catch level will exceed the scientific recommendation. From 1985 through 1996, the reported landings exceeded the upper end of the recommended range in every year except for 1989 (the only year in which the council set the quota at or below the midpoint of the range). Actual landings, moreover, almost certainly exceeded reported landings as a result of illegal fishing. Implementation of fishery regulations is inevitably imperfect. Fisheries experience "overages," in which reported catch exceeds quotas, because of imperfect reporting systems and because of political pressure not to close fisheries even after they have met their quotas. **Figure B** shows the overages, or "implementation overfishing," in the Gulf king mackerel fishery for the years studied.

* Josh Eagle and Barton H. Thompson Jr., "Answering Lord Perry's Question: Dissecting Regulatory Overfishing," *Ocean and Coastal Management* 46 (2003): 649–679.

vide for the rebuilding of overfished stocks in a time period that is "as short as possible," taking into account various factors including the status and biology of the fish stock and the needs of fishing communities. Unless the biology of the fish stock, other environmental conditions, or international agreements dictate otherwise, the rebuilding period must not exceed ten years. If a council does not submit a plan within a year of learning that a fishery is overfished, NMFS must submit a federal plan to rebuild the stock. NMFS also must review council FMPs every two years to ensure that they are leading to "adequate progress toward ending overfishing and rebuilding affected fish stocks."[32]

Box 5:

The Role of Council Advisory Committees: A Case Study of the North Pacific Council and the Pacific Cod Fishery

Development of an FMP and of yearly quotas is a long and complicated process, involving input from multiple advisory committees. Although committees vary from council to council, the North Pacific Council's annual quota-setting process for Pacific cod provides a valuable illustration.

The Alaska Fisheries Science Center, one of six NMFS regional science centers, starts by preparing and compiling scientific and catch data into a yearly stock assessment for Pacific cod. The center presents the assessments for various Gulf of Alaska groundfish stocks in a draft Stock Assessment and Fishery Evaluation Report ("SAFE Report"). The SAFE Report contains a maximum allowable biological catch (ABC) recommendation, along with a harvest level recommended by the science center's fisheries scientists.

Next, the North Pacific Council's Groundfish Plan Team discusses the SAFE Report, together with the underlying stock assessments. Members of the Plan Team are appointed by the council, and the team consists of NMFS and academic fisheries scientists, council members, the NMFS regional administrator for Alaska, a representative of the Alaska Department of Fish and Game, a representative of the Washington Department of Fish and Wildlife, a representative of the International Pacific Halibut Commission, and a representative of the U.S. Fish and Wildlife Service. The Plan Team reviews the various stock assessments and writes a summary chapter for the SAFE Report in which it makes ABC recommendations. The Plan Team then delivers the SAFE Report to the council so that it may set final ABCs and corresponding total allowable catches (TACs) for the fisheries.

The Gulf of Alaska Groundfish SAFE Report and its recommendations go to the North Pacific Council's Advisory Panel (AP), its Scientific and Statistical Committee (SSC), and all council members. The AP, composed of industry and fishing representatives, does not usually make numerical ABC or harvest level recommendations to the council, but instead comments on the socioeconomic impacts of the proposed management measures. The SSC, composed of biologists, economists, statisticians, and social scientists, does make recommendations to the council on ABCs and advises the council on the information contained in the SAFE Report. The SSC is the final step before council action.

The council tentatively sets the preliminary TACs for the following year at the council's September meeting and finalizes the TACs at its December meeting after a public comment period.

Congress also added language in 1996 requiring that the councils take steps to reduce bycatch and address the effects of fishing on ocean habitats. The provisions mandate that the councils reduce these ecosystem effects "to the extent practicable."[33]

ADVISORY COMMITTEES

In making their management decisions, the councils receive advice and support both from fishery scientists in and out of government and from a variety of advisory groups (see Box 5). Scientists at regional NMFS offices typically prepare stock assessments and recommend allowable biological catch levels. Under the Magnuson-Stevens Act, moreover, each council must form a Scientific and Statistical Committee to advise it on catch levels and other scientific issues, as well as a Fishing Industry Advisory Committee to provide the fishing industry's perspective on issues before the council. Each council also is free to form other advisory committees; many have formed panels to advise them on issues ranging from industry operations and market conditions to the design and timing of regulations and emerging environmental concerns. Councils appoint the members to these various advisory groups and may use them to broaden the expertise and perspectives available to the councils. Most socioeconomic panels, for example, include one or two representatives of nonfishing groups. The fishing industry, however, dominates all the nonscientific advisory groups, and the ultimate management decisions remain with council members themselves.

THE RECORD OF THE REGIONAL COUNCILS

Managing a wild fish stock is not an easy task. Scientists often have only limited data on fishing stocks, and models are under constant refinement. Managers therefore must constantly decide on the appropriate degree of conservatism to use in protecting a fishery, and even conservative fishery plans can turn out to have overestimated the health of a stock. Conservatism, moreover, can come at a short-term cost to the local fishing industry and thus frequently con-

fronts political opposition. However, even with these problems recognized, the regional councils' record, as measured by the actual status of the fish stocks that they are responsible for managing, is disappointing.

One reasonable means of evaluating the health of a fish stock would be (1) to compare the current fishing mortality rate with the rate that, in the long run, would achieve the MSY, and (2) to compare the current population size with the population size that would provide the MSY (P_{MSY}). As discussed earlier, the Magnuson-Stevens Act requires councils to ensure that fisheries achieve the MSY on a continuing basis. Scientists also commonly use the MSY as a point for comparison. Where the current fishery catch exceeds the level that would produce MSY on a continuing basis, the fishery suffers from overfishing. Where the current population level is lower than P_{MSY}, the fishery is overfished.

In practice, however, determining the true state of council-managed fisheries is difficult for a number of reasons. First, the United States lacks even basic information about a number of important stocks. There are 932 stocks under federal management in the United States' EEZ, but NMFS has information sufficient to evaluate the full status of about 25 percent of them, slightly more than 230. Of the nearly 700 stocks of "unknown" status, 99 are "major stocks" (defined as stocks with annual landings of more than 200,000 pounds). Nine of the 30 most valuable domestic fisheries are of "unknown" status. Thus, NMFS does not know whether the two most valuable fisheries managed by the councils — pollock and brown shrimp — are overfished or not.[34]

There also are no independent assessments of the condition of fish stocks in U.S. waters. NMFS reports to Congress each year on the overall condition of U.S. fisheries. In classifying fish stocks, however, NMFS must rely on definitions written by the regional councils. Under the Magnuson-Stevens Act, the councils define the points at which a stock is overfished and at which the mortality exceeds MSY. NMFS must measure the success of the councils, therefore, using the targets that the councils themselves have set. This might not be a problem if determining overfished and overfishing conditions for a stock of fish were an easy, straightforward, and noncontroversial task. But the scientific uncertainty that surrounds even "known" fish species (i.e., those whose status is known) leaves significant discretion to the decision-maker. Environmental organizations, scientists, and fishermen all have criticized the definitions of "overfished" and "overfishing" adopted for particular fisheries as being either too low or too high. The councils, moreover, have not yet even developed definitions for a large number of stocks, making it impossible to measure their health.

Using the regional councils' own definitions, the state of the fisheries under their jurisdictions is not good. Of the 237 known stocks for which there is sufficient information to evaluate current stock levels, NMFS classifies approximately 36 percent (86) as overfished. Of the 274 stocks for which it can be determined whether overfishing is occurring, about one-quarter (66) are experiencing overfishing. Significantly, 48 stocks — about 20 percent of known stocks — are both overfished and experiencing overfishing, which suggests that effective rebuilding plans either have not yet been implemented or have not taken effect. These numbers are not much better for major stocks, which provide more than 99 percent of all fish — 9 billion pounds in total — caught by U.S. fishermen. Twenty-seven percent of major stocks are overfished, while 24 percent are subject to overfishing.[35]

There is a sharp difference among the councils in percentages of overfished fisheries and stocks subject to overfishing. As shown in Figure 1, more than 35 percent of the known major stocks in five council regions (New England, Mid-Atlantic, South Atlantic, Gulf of Mexico, and Caribbean) are subject to overfishing. By contrast, only one known major stock in the Pacific region is subject to overfishing and none in the North Pacific region is. About four of every ten major stocks are overfished in the five council regions plagued by overfishing, and 20 percent of known

TWENTY PERCENT OF FISHERIES WITH KNOWN STOCKS ARE BOTH OVERFISHED AND EXPERIENCING OVERFISHING.

major stocks managed by the Pacific Council are. According to the North Pacific and Western Pacific Councils, however, none of their stocks is overfished. These numbers should be viewed with caution, given that the overfished status of 40 percent (25 of 63) of the major stocks managed by those two councils is unknown. Box 6 explores why the North Pacific Council may have been more successful than others.

Although one should be careful in making direct comparisons with statistics from other countries, given the variation in definitions of "overfished" and the reliability of the available data, the United States' management record is surprisingly lackluster in light of the nation's relative success in managing other resources. Indeed, the U.S. record appears to be slightly worse than the average management record for the world as a whole. According to the Food and Agriculture Organization of the United Nations, of the worldwide fish stocks for which information is available, 28 percent are overfished — compared, as noted earlier, with 37 percent of all major and minor fisheries managed by regional councils in the United States.[36] This is worrisome because fishery scientists in the United States, particularly those working at NMFS, enjoy a reputation as some of the most sophisticated and accomplished fisheries science

Figure 1. STATUS OF MAJOR STOCKS*

	Major stocks	Major stocks with unknown population level	Known major stocks that are overfished	Cannot be determined if fishing is occurring at a sustainable rate	Known major stocks experiencing overfishing	Known major stocks that are both overfished and experiencing overfishing
NEW ENGLAND COUNCIL (Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut)	29	2 (7%)	10 (37%)	6 (21%)	8 (35%)	4 (17%)
MID-ATLANTIC COUNCIL (New York, New Jersey, Delaware, Maryland, Virginia)	11	2 (18%)	4 (44%)	0 (0%)	4 (36%)	3 (33%)
JOINT NE/MA	3	1 (33%)	1 (50%)	0 (0%)	3 (100%)	1 (50%)
SOUTH ATLANTIC COUNCIL (North Carolina, South Carolina, Georgia, Florida [Atlantic coast])	23	5 (22%)	8 (44%)	5 (22%)	9 (50%)	8 (44%)
GULF OF MEXICO COUNCIL (Florida [Gulf coast], Alabama, Louisiana, Mississippi, Texas)	23	14 (61%)	4 (44%)	12 (52%)	4 (36%)	3 (33%)
JOINT SA/GOM	8	2 (25%)	1 (17%)	2 (25%)	0 (0%)	0 (0%)
CARIBBEAN COUNCIL (Puerto Rico and Virgin Islands)	4	2 (50%)	1 (50%)	2 (50%)	1 (50%)	1 (50%)
PACIFIC COUNCIL (Washington, Oregon, California)	62	27 (44%)	7 (20%)	25 (40%)	1 (3%)	1 (3%)
WESTERN PACIFIC COUNCIL (Hawai'i)	13	4 (31%)	0 (0%)	13 (100%)	n/a	n/a
NORTH PACIFIC COUNCIL (Alaska)	50	21 (42%)	0 (0%)	6 (0%)	0 (0%)	0 (0%)
TOTAL	226	80 (35%)	36 (22%)	71 (31%)	30 (19%)	21 (14%)

Source: National Oceanic and Atmospheric Administration, *Status of Fisheries of the United States*, 2002.

*In calculating percentages for the table, the denominator in the second and fourth columns is the total number of major stocks managed. In the third column, the denominator is the number of those stocks for which NMFS has information sufficient to make an "overfished" determination. In the fifth column, it is the number of stocks for which the agency can assess whether or not overfishing is taking place. In the sixth column, the denominator is the number of stocks for which NMFS can make both determinations.

experts in the world. Given the ability of the scientists, one would expect that the United States' management record would be better, certainly not worse, than the worldwide record.

The councils also have not been very successful to date in rebuilding fisheries. NOAA's most recent report on the status of fish stocks claims that a few dozen stocks have improved from "overfished" to "not overfished" since 1997. However, NOAA does not claim that any of these stocks has been rebuilt to a level at which it can produce its MSY. The difference is significant. For example, a stock may be classified as overfished when its population is less than 20 percent of its level prior to fishing (the "unfished level"). A growth in population from 19.5 percent of the unfished level to 20.5 percent of the unfished level will result in the stock being reclassified from overfished to not overfished. But that stock cannot be considered "rebuilt" within the definition of the Magnuson-Stevens Act until such time as it reaches P_{MSY}. So long as stock size is less than P_{MSY}, the fishery is not producing as many fish as it can and potential production is being lost. Although P_{MSY} varies from stock to stock, usually fisheries scientists estimate it to be around 40 to 60 percent of a stock's unfished level. More than 60 percent of the stocks that are currently under council rebuilding plans, moreover, are still experiencing overfishing — suggesting that the councils have not yet adequately addressed the problem (too much fishing) that led to the fisheries becoming overfished in the first place and thus suggesting that rebuilding is unlikely to be successful.[37]

The record of the councils has not been entirely negative. More than half of the known, managed major species in the U.S. EEZs are not overfished. Moreover, councils on occasion have taken politically unpopular actions to help preserve species at risk. A recent example of an unpopular but biologically warranted decision is the Pacific Council's 2002 closure of rockfish fisheries. Although this draconian measure was necessitated in part by prior Pacific Council management, the council should be given credit for attempting to correct its previous errors.

A neutral observer, however, could not help but see significant room for improvement. If the nation is to protect and restore its vast fishery resources for this and future generations, it must do a better job of managing the fisheries.

Box 6:

Explaining the Possible Success of the North Pacific Council

According to NMFS reports, the North Pacific Council leads the way in successful fisheries management. None of its major stocks is currently listed as overfished or subject to overfishing. Many observers do not believe that the North Pacific Council has been as successful as this statistic suggests. First, the "overfished" status of many of the major stocks in the region — including some that support the enormous pollock fishery — is unknown. Critics also point out that the council has presided over the decline of several stocks, including valuable king and tanner crab fisheries, and that North Pacific fisheries discard more than 300 million pounds of bycatch annually. Finally, some conservation groups have criticized the council's management of the pollock fishery and its effects on Steller sea lions. Nonetheless, it is still worth considering the possible reasons why this council, unlike most of the others, seems to be achieving some management success.

Two policies might account for the relative health of North Pacific fish stocks: strict catch limits and a high level of observer coverage. The council pursues strict catch limits in three ways. First, it uses only hard quotas that place a firm limit on how many fish can be caught. Hard quotas, unlike the effort-based regulations favored by many other councils, go a long way toward ensuring that a fishery is closed when the biologically safe amount has been caught. Second, the council consistently follows the advice of science advisors. Unlike other councils (see Box 4), the North Pacific Council has rarely, if ever, set catch limits higher than scientific recommendations on safe catch levels. Finally, the council has adopted conservative caps on the total amount of fish that can be caught even when scientists believe higher catches may be permissible. For example, the council has limited Bering Sea catches of all groundfish to 2 million metric tons. This amount cannot be exceeded, even if the scientists say it can, unless the council decides in the future to amend the FMP.

Compared with other councils, the North Pacific Council also requires that a high percentage of boats carry independent observers. Observers are valuable to management. They provide reliable information on the amount and kinds of fish that fishing vessels are actually catching. In many regions, observers are not used because they are expensive and because some fishermen see them as an intrusion or as onboard police. The North Pacific Council requires that observers be present on all vessels longer than 60 feet, and it also mandates that the fishing industry pay for this coverage.

People have provided a variety of explanations for why the North Pacific Council has often adopted a more conservative approach. One reason may be council representation. Although the council does not have a member from any environmental organization, for example, at least one council member is active in a local conservation group. In our survey, several members of the council reported that diversity of perspectives aided their deliberations.

The North Pacific Council also may illustrate that history and long-term culture matter. The seeds of the council's approach may have been planted in the first decade and a half of the council's existence. From the passage of the Fishery Conservation and Management Act in 1976 until the late 1980s, foreign fleets dominated EEZ fisheries off Alaska. During this period, the council was extremely conservative in its management, and it faced no domestic political opposition to the imposition of strict conservation measures. In fact, domestic fleets, which were gradually building up their operations, urged the council to limit catches so that there would be an abundance of fish left once the U.S. fleets could operate at full capacity. The council's current approach may well be the fortunate vestige of that earlier era.



THE STUDY

To examine whether the makeup and structure of the regional fishery management councils might be undermining their effectiveness, we conducted a comprehensive study of the operations of four of the eight regional councils: the Gulf of Mexico Council (Gulf Council), the New England Council, the North Pacific Council, and the Pacific Council. We chose these councils because they manage the four most economically important fishing regions in the United States.

We began by visiting each council and conducting an initial survey of the council members' views, both by mail and in person. We also studied in depth how each council evaluated and resolved a major fishing management issue currently before it. Finally, we asked all members of each council, including both voting and nonvoting members, who had not completed an earlier questionnaire to complete a slightly shorter version of the questionnaire. Both questionnaires asked each council member about his or her background and education, the types of information considered in making decisions, the adequacy of the information, opportunities for input into the council's decisions both by the general public and by fishing interests, potential and perceived conflicts of interest, and whether the council member had ever recused himself or herself because of a potential conflict of interest.

The survey results are summarized in the Appendix. We ultimately received responses from more than half of the voting members of the four councils studied. Response rates ranged from a high of almost 80 percent for the Pacific Council to only 24 percent for the Gulf Council (in the latter of which, we were later informed, council members were told that it is generally not advisable to participate in such surveys). If the Gulf Council surveys are excluded from the total numbers, more than 60 percent of the total voting members of the other three councils completed the surveys. Two-thirds of the responses were from appointed members of the councils. Although we sent the surveys to all the members on the four councils, we received completed questionnaires from only five of the sixteen nonvoting members.

In the remainder of this report, we have tried as much as possible to let the council members speak for themselves. Because we promised the council members anonymity, we do not attribute comments to particular council members. But we have not changed the words used by the council members in their responses to our questions (except occasionally to correct punctuation or spelling or to replace acronyms with complete names). The quotations therefore are an accurate description of how the council members themselves view their institutions and decision-making processes.

Using the federal Freedom of Information Act, we also requested information about the councils from NMFS. We requested copies of the financial disclosure forms that all council members are required to complete and make available to the public; council members are required to disclose their financial interests in fishing or the seafood industry. We also requested information regarding recusals of council members due to financial conflicts of interest. We asked for any written queries sent by council members to NMFS regarding potential conflicts and for NMFS' written opinions, if any, on whether or not recusal was advisable. Finally, we asked for letters sent by NMFS to any council in which the agency fully or partially disapproved of the council's proposed conservation or management measures. NMFS is required to send such a letter to a council if a proposed action is deemed, upon review, to be inconsistent with the national standards or other provisions of the Magnuson-Stevens Act.

PROBLEMS WITH COUNCIL DECISION-MAKING

Although we looked at a number of different issues, four problems with the councils' structure have risen to the forefront. First, by giving the same body responsibility for making both conservation and allocation decisions, the Magnuson-Stevens Act reduces the likelihood of effective

conservation. The pressure to avoid difficult allocation decisions encourages the councils to neglect conservation. Second, councils are dominated by fishing industry representatives and, as a result, do not enjoy the diversity of perspectives necessary for good decision-making. Third, council members representing the fishing industry face frequent conflicts of interest, which threaten both effective decision-making and the public's confidence in the councils. Finally, although NMFS oversees the councils' decisions, its oversight historically has been deferential and is not an adequate answer to the concerns regarding the councils' decision-making.

COMBINING CONSERVATION AND ALLOCATION

Regional fishery management councils must make two difficult and related management decisions. First, councils must decide what size quota or other management controls to impose on a fishery. Scientific uncertainty complicates this task and leaves the councils with significant discretion. As discussed already, scientists often know only a limited amount about the stocks of fish that the councils must manage. As a result, the scientists' recommendations of optimum catch levels are merely best estimates, clouded by uncertainty. As one New England Council member said: "When the scientists give the council advice, the council members know that there's a wide range of probabilities. If they [NMFS scientists] say it's 782, they might say there's a 90% probability that it's somewhere between 325 and 1275; yes it's probably somewhere in there."[38] Councils must evaluate the scientific and other information and make their best judgment on what is necessary to rebuild overfished fisheries and sustain fisheries that are currently healthy.

Second, having made their conservation decisions, councils must decide how to allocate the quotas, or any other rights and benefits created by the management regime, among the members of the fishing communities. This task is never politically easy. Councils often must decide how to allocate a limited quota among diverse fishing interests, all of whom have significant economic and, frequently, social and cultural interests at stake. Councils must decide on the relative claims of commercial and recreational fishermen, small and large fishing interests, longtime fishermen and relative newcomers, varying geographic areas and boat types, and fishermen from different regions, among others.

This pairing of tasks is not inevitable. In theory, the two tasks could be divided between two different decision-makers — one deciding on the appropriate conservation measures (the "conservation decision") and the other allocating quotas or rights among the fishermen (the "allocation decision"). As discussed in our later section on recommendations, we believe the functions should be separated. Under current law, however, the regional councils make both decisions.

Requiring the regional councils to make both conservation and allocation decisions creates significant pressure to adopt higher quotas and less stringent conservation measures. Faced with the painful task of allocating a limited quota among competing fishing interests, councils can reduce the pain only by increasing the

"WHEN THE SCIENTISTS GIVE THE COUNCIL ADVICE, THE COUNCIL MEMBERS KNOW THAT THERE'S A WIDE RANGE OF PROBABILITIES. IF THEY [NMFS SCIENTISTS] SAY IT'S 782, THEY MIGHT SAY THERE'S A 90% PROBABILITY THAT IT'S SOMEWHERE BETWEEN 325 AND 1275; YES IT'S PROBABLY SOMEWHERE IN THERE."

— NEW ENGLAND COUNCIL MEMBER



size of the quota and thus the amount of fishing rights that can be apportioned. As councils consider the difficult allocation decisions that are down the road, they inevitably are tempted to relax the conservation measures that they otherwise might adopt. And the inevitable scientific uncertainty surrounding the appropriate quota level often makes it easy for councils to succumb to this temptation by abandoning caution and setting lax standards.

The Gulf Council's decision to set a high quota for king mackerel in the early 1990s, despite the mackerel's overfished condition, is a vivid example of this problem (see Box 7). Not wishing to reduce the bag limits for recreational fishermen, and not willing to reduce the relative quota shares for various classes of commercial fishermen, the council ultimately allowed 9.8 million pounds of mackerel to be caught in the 1992–1993 season — compared with the "total allowable catch" of 6.1 million pounds recommended by the council's Mackerel Management Committee. The ultimate catch had only a 20 percent chance of achieving the fishery's rebuilding goals.

Box 7:

How Allocation Impacts Conservation: The Gulf King Mackerel Fishery



The 1992–1993 Gulf king mackerel fishery provides several good examples of how the conservation/allocation conflict plays out in actual decisions. The Gulf Council's Mackerel Management Committee recommended an overall quota for that fishing year of 6.1 million pounds.* Based on long-standing council policy, the Gulf Council normally would have allocated 68 percent of the quota (4.2 million pounds) to the recreational fishery and 32 percent (1.9 million pounds) to the commercial fishery.

These numbers, however, presented a political problem for the council. The recreational fishery was managed by "bag limits" — a restriction on the number of fish each recreational fisherman could catch on each fishing trip. The bag limit for any given year equaled the quota (converted to units of ten-pound fish) divided by the estimated number of recreational fishing trips for the year. Because over 280,000 fishing trips were projected for 1992–1993, the council would have had to set the bag limit at 1.5 fish per person per trip if the recreational quota were set at 4.2 million pounds. Prior to 1992, the bag limit in the king mackerel fishery had been three fish per person per trip. Since it is impossible to catch just half a fish, the council would have had to set the bag limit at only one fish.

Many council members were unhappy with this outcome. They did not want to reduce the bag limit below two fish. A bag limit of two, however, would require giving recreational fishermen a quota of well over 5 million pounds of king mackerel. In the end, the council allocated more fish to the recreational anglers by relaxing conservation. The council set the overall quota at 7.8 million pounds, almost 1 million pounds higher than *even the industry advisory panel had recommended*. This permitted the council to give 5.3 million pounds to the recreational fishery and 2.5 million to the commercial fishery. Estimates made after the 1992–1993 fishing season showed that landings for the recreational fishery that year totaled more than 6.2 million pounds, nearly 50 percent higher than scientific recommendations.

The conservation/allocation conflict was also evident in the management of the commercial fishery that year. When the Gulf Council raised the recreational quota to accommodate the two-fish bag limit, it was compelled to raise the commercial quota an equal 26 percent in order to maintain the traditional allocation ratio between the two sectors. The resulting 2.5 million pound commercial TAC was allocated between eastern and western zones. The eastern zone, which received 1.73 million pounds, consisted of the Gulf and Atlantic coasts of Florida. The council made no regulatory allocation between these two Florida fisheries. The commercial fisheries in the eastern zone reached 1.73 million pounds by the end of 1992 and were closed on January 13, 1993.

Due to a variety of factors, including a court decision that invalidated several Florida state regulations and bad weather that "muddied the waters, making the detection of fish difficult," commercial landings of king mackerel in the eastern zone were far higher off the Gulf coast of Florida than they were off the state's Atlantic coast. The fishermen off the Atlantic coast complained to the council that this was not fair because both the weather conditions and the judicial decisions were outside their control. Furthermore, while there had been no formal allocation in the past, "[e]qual sharing of this resource by east [Atlantic] and west [Gulf] coast fisheries is clearly evident in historical landings. Yearly and average landing estimates for the past 23 years both before and after implementation of Federal quota management indicate that, despite some disproportionate yearly catches, the east/west coast catches trend toward parity."† Finding a "social and economic emergency," the council recommended that the Atlantic commercial fishery be reopened to allow for an additional 259,000 pounds of king mackerel to be caught.

In the end, recreational and commercial fishermen caught a total of 9.8 million pounds of king mackerel during the 1992–1993 season, even though the stock already was listed as overfished. By contrast, NMFS scientists had estimated that the quota should be set around 5 million pounds (and no higher than 6.1 million), and the council's own king mackerel committee had recommended that the quota be set at 6.1 million pounds.

According to scientists, there was more than an 80 percent chance that the actual landings of 9.8 million pounds exceeded the "true" allowable biological catch.

* Although the Gulf and South Atlantic Councils jointly manage the Gulf and Atlantic king mackerel fisheries, the Gulf Council has primary decision-making authority with respect to the Gulf fishery, which includes commercial fishing off the east coast of Florida.

† 58 *Fed. Reg.* 10990 (1993).

LACK OF DIVERSE VIEWPOINTS

Research on decision-making has shown that diverse perspectives are extremely valuable in making effective decisions.[39] Groups with diverse perspectives on an issue tend to look at and consider a broader set of information in making their decisions. Researchers have found that, where groups are dominated by a particular group perspective, they look far more at information that is supplied by or accepted by the dominant group (what psychologists call "shared information") than at other information that may cast doubt on the shared information. One study of group decision-making, for example, found that nondiverse groups discussed 45 percent of the shared information that was available to them but only 18 percent of the other information.[40]

Groups with diverse perspectives also appear to make better decisions. There are several reasons for this. First, diverse groups bring a greater array of experience to the table. In the business field, for example, companies that have diverse business experiences tend to make better acquisition decisions and to pay less for their acquisitions.[41] In addition, members of homogeneous groups tend to reinforce one another's views. As a result, the group is less likely to challenge traditional viewpoints that are widely held within the group but wrong. This problem is significant enough that social scientists have dubbed it "groupthink."[42]

Where commissions or councils make regulatory decisions, the diversity of the group is also important to the democratic validity of the decisions. Fearing that members of well-defined groups often may be predisposed to the views of that group, citizens with different perspectives fear that highly homogeneous groups will not give them a fair hearing. As a result, participation is discouraged, and citizens may end up suspecting even well-grounded decisions.

Legislatures often have recognized the value of including diverse perspectives on governmental boards and commissions. As noted earlier, for example, many states require fish and game commissions to include diverse perspectives. Congress also has mandated diversity in numerous settings. By law, for example, the U.S. Securities and Exchange Commission, the Federal Trade Commission, and the Federal Energy Regulatory Commission must have members from more than one political party.

In 1972, moreover, Congress passed the Federal Advisory Committee Act (FACA) requiring that advisory committees provide broad and diverse perspectives. Under FACA, the membership of an advisory committee must be "fairly balanced in terms of points of views represented and the functions to be performed by the advisory committee."[43] Congress criticized prior advisory commissions that sometimes reflected the view only of the industry being regulated:

> When [one advisory committee] met with government officials to consider a proposed national industrial wastes inventory questionnaire, only representatives of the industry were present. No representatives of conservation, environment, clean water, consumer, or other public interest groups were present. This lack of balanced representation of different points of view and the heavy representation of parties whose private interests could influence their recommendation should be prohibited by the provision contained in [FACA].[44]

Although the regional councils are exempt from FACA's requirements, the diversity requirements speak directly to the value of including broad perspectives on the councils. The regional councils look very much like advisory committees, with one important exception — they make fishery management decisions themselves rather than merely giving advice to NMFS. The fact that the councils are themselves making the key decisions argues even more strongly in favor of ensuring broad perspectives.

So how broad are the perspectives and viewpoints represented on the regional councils? If the councils were responsible only for allocating an overall fishing quota among various groups of commercial and recreational fishing interests, they might score well. As discussed in more detail later in this report, the voting members of the councils reflect a fairly diverse set of

"[STATE DIRECTORS ARE] THE MOST SUSCEPTIBLE TO CONSTITUENT PRESSURES ON A WIDER VARIETY OF ISSUES THAN ANY SINGLE CONSTITUENCY COUNCIL MEMBER WOULD BE."

—FORMER COUNCIL MEMBER

commercial and recreational fishing interests. Few fishing interests lack a voice on the regional councils.

But the councils provide little diversity of perspective on conservation questions. Most council members are affiliated with or reflect commercial and recreational fishing interests. Virtually none comes from the conservation world or the public at large.

As noted earlier, "appointed members," who are selected by the Secretary of Commerce from gubernatorial lists, make up a majority of every council. In some councils, almost two-thirds of the voting members are appointed. Appointed members, in turn, are primarily fishing interest representatives. In 2002, 83 percent of all appointed council members represented fishing interests. In total, 47 percent represented commercial fisheries and 36 percent represented recreational fisheries. As shown in Figure 2, these percentages — with the exception of those for the Caribbean Council — did not vary significantly among councils. Fishery representatives controlled a majority of the votes on four of the eight councils — and almost a majority on the others.

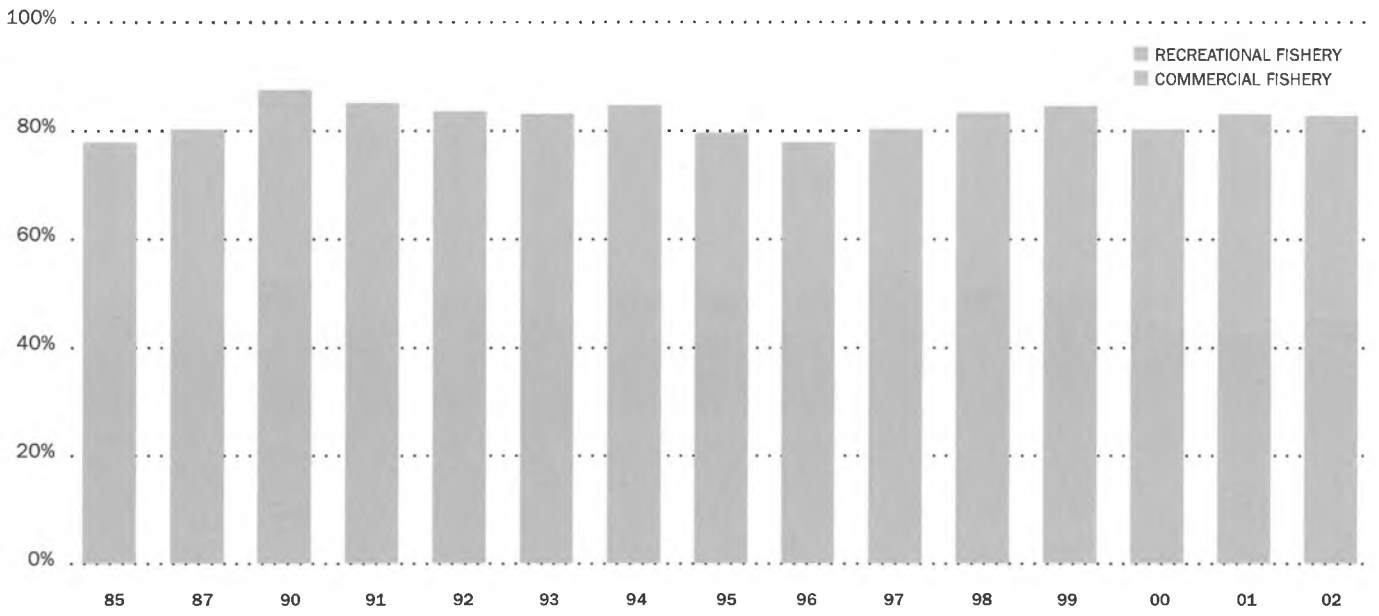
Only 18 percent of the appointed council members in 2001 did not directly work in or represent the fishing industry. Many of these members, moreover, were academic scientists or economists with long-standing affiliations with the fishing industry. Only the New England Council currently includes a representative from a national conservation organization, Environmental Defense. Some of the councils include fishing representatives who are also members of local conservation organizations. The North Pacific Council, for example, includes the owner of a small boat who is also a board member of the Alaska Marine Conservation Council, a local fishery conservation group. In the entire history of the council system, however, only a

Figure 2. APPOINTED MEMBERS ON EACH COUNCIL 2002

	Total voting members	Appointed members			Voting members who were appointed	Appointed members who were fisheries representatives	Voting members who were fisheries representatives
		Commercial	Recreational	Other			
NEW ENGLAND	18	9	2	1	67%	92%	61%
MID-ATLANTIC	21	6	5	2	62%	85%	53%
SOUTH ATLANTIC	12*	3	3	1	58%	86%	50%
CARIBBEAN	7	2	1	1	57%	75%	43%
GULF OF MEXICO	17	3	7	1	64%	91%	58%
PACIFIC	14	3	3	2	57%	75%	43%
NORTH PACIFIC	11	4	1	2	64%	71%	45%
WESTERN PACIFIC	13	3	3	2	62%	75%	46%
TOTAL	113	**33**	**25**	**12**	**62%**	**83%**	**51%**

Source: National Oceanic and Atmospheric Administration, 2002 *Report to Congress on Apportionment of Membership of the Regional Fishery Management Councils*, 2003.
*One appointed seat was vacant in 2002.

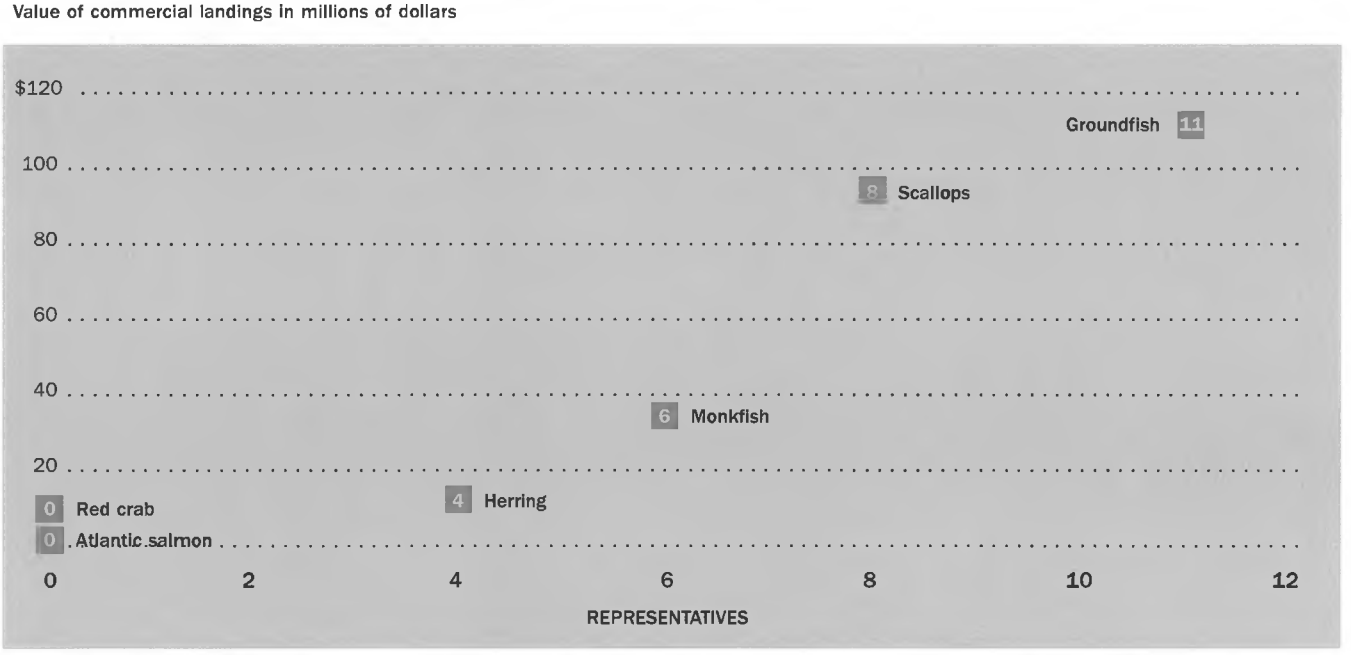
Figure 3. REPRESENTATION OF VARIOUS SECTORS OVER TIME



Sources: Cicin-Sain and Knecht, *The Future of U.S. Ocean Policy,* 2000; National Oceanic and Atmospheric Administration, 2002 *Report to Congress on Apportionment of Membership of the Regional Fishery Management Councils,* 2003.

Figure 4. NUMBER OF SEATS HELD BY FISHERY REPRESENTATIVES ON THE NEW ENGLAND COUNCIL AS A FUNCTION OF THE ECONOMIC VALUE OF THE FISHERY

Some members represent or participate in more than one fishery.



Sources: National Oceanic and Atmospheric Administration, *2002 Report to Congress on Apportionment of Membership of the Regional Fishery Management Councils,* 2003; NOAA Fisheries, Division of Fisheries Statistics and Economics, Landings Database, http://www.st.nmfs.gov/st1/commercial/index.html.

IN OUR SURVEY, MORE THAN 90 PERCENT OF THE APPOINTED MEMBERS REPORTED THAT THEY WERE APPOINTED TO REPRESENT, AND DID REPRESENT, A PARTICULAR SECTOR OF THE FISHING INDUSTRY.

handful of representatives of conservation groups have served as members.

Since 1985, the percentage of council members who directly work in or represent the fishing industry has ranged as high as 88 percent, never dropping below 78 percent (see Figure 3). Commercial representation among appointed members during the period has varied between 45 and 50 percent, and recreational representation has ranged from 20 to 27 percent of the total. The number of appointed seats held by representatives of a particular fishery can be correlated on some councils with the economic value of that fishery (see Figure 4). Representation of "other" interests throughout the councils has been as low as 12 percent of the total and as high as 22 percent.[45]

Representatives of the fishing industry, of course, are not monolithic, and some see themselves as bringing other perspectives to council meetings. As noted already, one of the fishermen on the North Pacific Council also serves on the board of a local conservation group, and a nonvoting member of the North Pacific Council reported that a "number of council members have a strong conservation ethic." Most appointed members, however, believe that they represent the fishing group from which they are drawn. In our survey, more than 90 percent of the appointed members reported that they were appointed to represent, and did represent, a particular sector of the fishing industry. Many further believed that they represented the interests of particular geographic areas or fishing ports.

State employees who serve as governmental members of the councils also could bring alternative views. Several state representatives noted that they represented the public interest generally (including conservation-oriented interests such as sustainable fisheries), and some emphasized that they were legally required to represent all constituencies. The added diversity, however, is marginal for several reasons. First, many of the governmental members, although they recognize their broader responsibilities to the public, align themselves closely with fishing interests. Asked whom he represented, for example, one state representative noted that he "directly represent[ed] the fishermen, commercial and recreational," of his state. Nongovernmental council members also reported that governmental representatives often reflected fishing interests. A member of the New England Council, for example, observed that "state directors essentially represent fishing industry participants." One former council member went so far as to suggest that state directors were "the most susceptible to constituent pressures on a wider variety of issues than any single constituency council member would be."

Second, when governmental members try to represent a broader set of public interests (and many do), they almost inevitably balance the interests of their various constituencies. While appointed members feel free to argue for a particular constituency, those governmental members who seek to represent both fishermen and the environment must appear to weigh and reflect the concerns of all constituents. They are thus unlikely to advocate strongly for environmental concerns in the face of strong fishing interests. As a result, they do not bring the diversity of perspectives to the council process needed to ensure that orthodoxy is challenged, other points of view are fully considered, and difficult political decisions are made.

Finally, even if some state representatives bring conservation perspectives to council deliberations, fishing interests still dominate to a degree that undermines effective decision-making. Even groups that include a few minority voices often fall victim to the problem of homogeneity. Debate is most effective when it incorporates a robust, open, and full exchange of different perspectives. Our study, by contrast, found a consistent underrepresentation of environmental views in council deliberations.

Several council members also suggested that the imbalance in council members is remedied in part by broader representation on some of the council advisory committees. While broader representation on these subsidiary bodies is impor-

tant, the panels are not a substitute for balanced councils. Recommen-dations made by the panels are given to the councils only after they have been approved by majority vote, so the councils do not generally hear multiple perspectives. Ordinarily, moreover, only one or two of the ten or more members of a panel come from outside the fishing industry.

In summary, many of the council members we interviewed believed that the councils did not fully reflect or represent all public constituencies. As one council member put it, the "current 'architecture' of the Council system is too 'coarse' to be a true and fair multi-party negotiation." Council members in particular were concerned about the adequacy of environmental representation.

More than half of the respondents, representing all of the four councils surveyed, believed that environmental interests were underrepresented on their councils. Even council members who pointed out that appointees often bring multiple perspectives to the council reported that environmental interests were underrepresented.

POTENTIAL CONFLICTS OF INTEREST

The potential for conflicts of interest heightens the concerns posed by the fishing industry's dominance of the regional fishery management councils. Advocates of good government often worry that regulated industries may "capture" the agencies that are supposed to regulate them. In a "captured" agency, governmental employees who are sworn to protect the public interest instead protect the interests of the industry.[46] In the case of the councils, there is no concern about capture because the "agency" itself is composed of industry leaders. The councils cannot be captured by industry because their members are the industry. The question is how seriously council members' financial interests in fishing and seafood businesses affect the quality of, and the public's trust in, council decisions.

Avoidance of conflicts of interest has long been a hallmark of good government in the United States. According to scholars and policy makers, there are several reasons why governments should eschew conflicts.[47] First, conflicts of interest inherently undermine the American commitment to equal treatment of equal claims. As citizens of the United States, we each expect and demand that the government will treat our interests no differently from those of other citizens. When conflicts of interest exist, however, there is a significant risk that some interests will receive more of a hearing and would be given more weight in the final decision.

AS ONE APPOINTED MEMBER BLUNTLY PUT IT, "EVERYONE HAS CONFLICTS."

Second and relatedly, even conflicts of interest can undermine the integrity of government policy-making institutions. The United States is firmly committed to democratic decision-making processes in which governmental agencies and institutions listen and respond in an open and transparent fashion to differing interests. Potential conflicts of interest open up the possibility of decisions being made not through these democratic processes but through discussions or understandings outside the governmental processes themselves.

Third, conflicts of interest can lead to inefficient regulation. When personal, financial, or relational considerations influence a regulator's decision, even unconsciously, the regulator is less likely to make the decision that is best for the population as a whole. Potential conflicts of interest, in short, can cloud judgment even



CURRENT CONFLICT RULES SET A "VERY HIGH THRESHOLD" THAT IS SELDOM TRIGGERED.

for the regulator who has the best of intentions and has studied an issue extensively.

Finally, potential conflicts of interest can undermine public confidence in governmental institutions. The people's trust in regulatory agencies such as the regional councils depends on a faith that the institutions are focused on the overall public good rather than on personal gain. When potential conflicts of interest come to light, that trust can be permanently damaged. As a consequence, citizens lose faith in the institutions and are more likely to sue or to ignore the institution's mandates when they disagree with a decision.

It is important to emphasize that none of these concerns assumes that governmental regulators consciously act on conflicts of interest in order to place themselves in a better financial position. One of the most pernicious aspects of conflicts of interest is that they can undermine effective governance even when a regulator makes the best effort to ignore the conflict and pursue what he or she believes is the public interest. Part of the reason is that it is all too easy for all of us to believe that what is in our own interest is also best for the public at large. We might think we are promoting the public's best interests when we in fact are advancing our own. Another part of the reason is that the public perception of a conflict of interest having influenced a decision is damaging whether or not the conflict actually did affect the decision.

For all these reasons, both federal and state governments have outlawed conflicts of interest for more than a century. The principal federal prohibition on conflicts of interest within the executive branch imposes criminal liability on any federal officer or employee who participates "personally and substantially ... through decision, approval, disapproval, recommendation, the rendering of advice ... or otherwise" in a "ruling or other determination" in which "he, his spouse, minor child, general partner, [or] organization in which he is serving as officer, director, trustee, general partner or employee" has a financial interest.[48] Although the statute does not define "financial interest," the courts have interpreted it broadly as a "real possibility of gain or loss."[49]

Individual regulatory agencies also have adopted internal rules designed to avoid any potential conflict of interest in their decision-making. The Federal Communications Commission, for example, has long prohibited its officials and employees while they are working for the agency from participating in or having any financial interest in the telecommunications industry.[50] These prohibitions extend to relatives and business associates of officials and employees as well.[51] The former Interstate Commerce Commission also barred its members and employees from holding any securities or other financial interests in any transportation carriers or other entities that were subject to regulation under the Interstate Commerce Act.[52] Similar regulations have been adopted by a large number of independent and executive federal regulatory agencies, including the Bureau of Alcohol, Tobacco, Firearms and Explosives,[53] the Office of Thrift Supervision,[54] the Federal Energy Regulatory Commission,[55] the U.S. Food and Drug Administration,[56] and the Farm Credit System Insurance Corporation.[57]

MORE THAN 60 PERCENT OF ALL APPOINTED MEMBERS REPORTED HAVING A DIRECT FINANCIAL INTEREST IN FISHERIES THAT THEIR COUNCILS MANAGE AND REGULATE.



When Congress passed the FACA, one of the issues it considered was the advisability of permitting advisory bodies that often include industry representatives to make ultimate decisions. As Congress noted, a "number of committees ... have been allowed to take on a quasi-decision-making status."[58] In Congress' view this was dangerous, in part because special interest groups might "exert undue influence upon the government through the dominance of advisory committees which deal with matters in which they have vested interests."[59] FACA therefore provides that the "function of advisory committees should be advisory only, and ... all matters under their consideration should be determined, in accordance with law, by the official, agency, or officer involved."[60] Congress, in short, did not want committees subject to conflicts of interest to be involved in ultimate decision-making.

Potential conflicts of interests, however, are the rule rather than the exception among appointed members of the regional fishery management councils, who are specially exempted from federal conflict-of-interest laws. To determine the degree of the potential conflict, we examined the financial disclosure forms that council members had filed in the previous six years. These forms show the particular fisheries in which members have financial interests (although they do not disclose the extent of their interests). Not surprisingly, given their backgrounds, more than 60 percent of all appointed members reported having a direct financial interest in fisheries that their councils manage and regulate. This percentage actually understates the potential degree of conflict on the councils because it does not include appointed members who lobbied or otherwise represented fishing industries for financial compensation but who did not participate in the fishery.

Under existing conflict-of-interest rules governing the regional councils, moreover, council members can frequently vote on management decisions even though the decisions may directly affect their business interest. Members of the regional councils appear to be the only governmental decision-makers at the federal level who are exempt expressly from criminal liability for conflicts of interest.[61] Under the Magnuson-Stevens Act, a council member is free to vote on a management action unless the action "would have a significant and predictable effect" on his or her financial interests. According to the act, moreover, an action has a "significant and predictable effect" only when the member would enjoy an "expected and substantially disproportionate benefit ... relative to the financial interests of other participants in the same gear type or sector of the fishery."[62] Under NMFS regulations, council members follow a "10 percent rule" in which council members recuse themselves if their interest in the fishery at issue is greater than 10 percent.[63] As one council member observed, this is a "very high threshold" that is seldom triggered.

Governmental records indicate that council members seldom formally recuse themselves in practice. To determine how often council members actually recuse themselves from council decisions because of potential conflicts of interest, we asked NMFS for copies of all formal recusals filed by council members. NMFS, in turn, was able to produce documentation of only two recusals since 1997, despite the fact that council members participated in thousands of management decisions during this period of time. Two survey responses referred to voluntary recusals other than those documented by NMFS, suggesting that council members sometimes might recuse themselves or decline to vote without following formal procedures. The survey responses as a whole, however, indicate that even informal recusals are infrequent events. Instead, council members often find reasons to justify voting on issues in which they, family members, or friends have financial stakes (see Box 8).

Council members confirmed in the surveys that conflict-of-interest standards are quite lax. According to one appointed member of the

THE SURVEY RESPONSES AS A WHOLE INDICATE THAT EVEN INFORMAL RECUSALS ARE INFREQUENT EVENTS. INSTEAD, COUNCIL MEMBERS OFTEN FIND REASONS TO JUSTIFY VOTING ON ISSUES IN WHICH THEY, FAMILY, OR FRIENDS HAVE FINANCIAL STAKES.

Gulf Council, members "are required to disclose any and all financial connections we have to industry every year. Once that is done, we are able to vote on any or all matters!" A member of the North Pacific Council reported that he could not imagine any situation in which a council member would recuse himself or herself because of involvement in the fishing industry. "I'm not sure that it would ever happen. I think the system is designed whereby Council members representing industry vote their self-interest." Most council members simply seemed resigned to the existence of conflicts of interest on the councils. As one appointed member bluntly put it, "Everyone has conflicts."

Council members are themselves concerned about conflicts of interest among the members. As the outgoing chairman of the Pacific Council, Hans Radtke, recently said, "All you have to do is look at the makeup of the Council



Box 8:

Is There Any Justification for Allowing Conflicts of Interest on the Councils?

In our survey, we tried to get a sense of how council members themselves felt about the conflict-of-interest issue. No council member disagreed that potential conflicts pervade the council system. At the same time, council members differed as to what, if anything, ought to be done about conflicts.

Some council members reported that they felt uncomfortable about voting on particular issues but ultimately justified to themselves that it was okay to vote. One of the council members, who was from a commercial fishery, justified voting on the ground that only a small number of commercial representatives sat on the council, so recusal would undermine the commercial voice. Another council member dealt with uncomfortable situations in which a vote would favor friends or former business associates either by not saying much during council debates or by announcing the nature of the potential conflict at the start of discussion so that other council members would know.

A number of council members tried to justify the current lax conflict-of-interest rules. Some argued that council members should not recuse themselves, even if they have a personal interest in the fishery at issue, because members with potential conflicts may have knowledge or expertise of importance to the debate. As one nonvoting member observed, appointed members are on the councils because of their "knowledge and experience." Or, in the words of another nonvoting member, "members are (or should) be selected on their basis of fishery knowledge and often the member most involved is the one who can make significant contributions to the discussion." According to these council members, the only issue should be whether council members reveal their potential conflicts. "As long as you know their involvement they may be the expert you need."

As discussed in Box 11, however, fishermen do not need to vote on fishing measures in which they or friends have financial interests in order to provide their expertise to the management process. Conflicts of interest become troubling only when fishermen are involved in, or vote on, final decisions about management measures that affect them, their family, or friends.

Several other members believed that a council member should not recuse himself, even if his fishing constituency would benefit, because a central purpose of the councils is to ensure that all fishing interests are represented. According to one council member, representing a particular fishery "constituency" inevitably means voting for measures that will benefit friends, neighbors, or clients. Or, in the words of another council member, "Their constituents expect them to stand up for them, which should be expected." Again, disclosure was the key to most of these council members. If a council member reports the potential conflict, other council members can take that into account in evaluating their views. In the opinion of several respondents, conflicts of interest always have been present but seldom have influenced decisions.

A variant on this argument is that conflicts of interest are not significant on the councils because fishermen will want to preserve the very fisheries that support them. As one council member observed, the "original concept of the [Magnuson-Stevens] Act was that fishermen would make the 'right' decision because they were (1) most knowledgeable, (2) it was in their best interest to do so."

Other council members suggested that the structure of the councils makes conflicts of interest less troubling than they might first appear. Several council members, for example, suggested that the diversity of fishing interests on the councils reduces the risk that conflicts of interest will undermine the public interest. Fishermen, one council member suggested, are good at pointing out when colleagues are voting their interest rather than good public policy: "There is no one who can cause a red face issue faster than a competitor or someone in a like situation." The same council member also suggested that the presence of state and federal officials, as well as the occasional appointee from outside the fishing industry, "buffers" the conflicts. One NMFS representative similarly suggested that "there are enough voting members of the Council to balance viewpoints."

Because council members are often appointed to represent particular fishing interests, several council members suggested that members should recuse themselves only when they would benefit more than other members of the industry. As one governmental member described the issue, the important distinction is the "boundary between [the council member's] particular fishery need and the needs of all those involved in that fishery. The former may be C of I; the latter is not." Or, as another council member expressed the difference, only "specific benefits," not "sectoral benefits," justify recusal.

As other council members noted, however, these arguments ignore the imbalance in interests represented on the councils. As discussed in the text, conservation interests are not represented on most councils. In answer to the question of whether he thought it was ever "unfair" for another council member to participate in a vote in which he or she had a conflict of interest, one appointed representative replied:

"All the time. Self-interest defined as direct financial interest is much too low an ethical standard. If this were a true multi-party negotiation with all 'stake holders' adequately represented at the table, then the self-interest question would tend to balance out in negotiation. However, the current structure is much too 'coarse' and it is possible for one sector to economically disadvantage another through coalition building amongst the voting members. Direct financial interest is hidden in management trends over time."

and see the conflict of interest."[64] About a third of those who responded to our survey reported that they had considered it unfair in one or more instances for a fellow council member to participate in a decision because he or she had a financial interest in the outcome. Similarly, one-third believed it had been unfair for a fellow member to vote in light of financial interests held by relatives or friends. Written comments further highlighted the nature of these concerns. One member of the New England Council, for example, reported that "many council members are influenced by impact of decision on selves or friends," even where there was no technical conflict under the council regulations. One nonvoting council member reported "times when I felt that council members pushed the envelope" and noted that the "current regs are fairly ineffectual."

Some council members observed that it was difficult for council members to isolate themselves from conflicts of interest and vote the public interest. One state representative put the point well when he said: "There are very few truly objective Council members who aren't always thinking about impact of rules on their livelihoods. Just human nature. The few Council members who look beyond parochial interests are the real fisheries management heroes and heroines." Even those council members who wish to take a more public perspective sometimes find it difficult to achieve. According to one commercial fisherman who is a member of a council, although the "culture" of that council is to "strive for the ideal — conservation above constituency," the "reality is that a few Council members make blatant allocation grabs, and/or lobby shamelessly for a specific constituency — forcing the entire body into a much cruder form of negotiation." As one member put it: "How could I be expected to vote against my job and my community?"

The participation of fishermen in management decisions involving their fishery also heightens the tension between conservation and allocation described earlier. As one appointed council member related the problem, "Council members view every decision as allocative. Every member feels his role is to defend his sector." Council members vote for laxer fishing standards to ensure that their sectors are protected.

One might wonder, however, why representatives of the fishing industry do not worry more about the long-term sustainability of fisheries in making conservation decisions. Industry representatives typically have a short-term interest in high catches, but future employment in the fishing industry depends on sustainable fisheries. Indeed, supporters of the council system frequently argue that fishermen ought to be in charge because their livelihoods depend on the continued existence of healthy fish stocks.

Social scientists have long been interested in whether resource users such as fishermen will favor their short-term or long-term interests when the two interests conflict. Researchers have found that resource users typically resolve the conflict in favor of avoiding short-term sacrifices, for several reasons. First, people are inherently optimistic, particularly if there is any scientific uncertainty regarding the impending tragedy. Resource users believe that gloomy predictions of resource depletion are unlikely to come true, and that, if the predictions do come true, they will find a way to deal with the problem. Second, resource users tend to discount strongly the future benefits of current sacrifices. Trying to weigh the current costs of catching fewer fish against the future benefits of having a sustainable fishery, people focus on the current costs. Third, most people, not just fishermen, will accept significant future risks to avoid even relatively small current losses. People do not like to sacrifice and so will gamble on the future to avoid a current sacrifice. Finally, resource users are slow to blame themselves for the decline of their resource and thus typically are unwilling to support solutions that damage their own interests. All of these cognitive "biases" combined make it very unlikely that most fishermen will support significant catch reductions even where needed to ensure the long-term sustainability of their fishery.[65]

"[THERE WERE] TIMES WHEN I FELT THAT COUNCIL MEMBERS PUSHED THE ENVELOPE AND [THE] CURRENT REGS ARE FAIRLY INEFFECTUAL."

— A NONVOTING COUNCIL MEMBER

THE QUESTION IS HOW SERIOUSLY COUNCIL MEMBERS' FINANCIAL INTERESTS IN FISHING AND SEAFOOD BUSINESSES AFFECT THE QUALITY OF, AND THE PUBLIC'S TRUST IN, COUNCIL DECISIONS.

"COUNCIL MEMBERS VIEW EVERY DECISION AS ALLOCATIVE. EVERY MEMBER FEELS HIS ROLE IS TO DEFEND HIS SECTOR."

— AN APPOINTED COUNCIL MEMBER

LITTLE EFFECTIVE FEDERAL OVERSIGHT

These various structural problems might not lead to adverse results for U.S. fisheries if NMFS were able to easily police the councils' decisions and substitute its own judgment when needed. Although NMFS in theory enjoys the authority to oversee the councils, the procedures established by the Magnuson-Stevens Act make it difficult for NMFS to execute this authority effectively. NMFS, moreover, does not have the resources, nor perhaps the political clout, to police the councils closely.

NMFS' principal power over the councils, as noted earlier, is its authority to disapprove all or parts of council plans and management measures that are inconsistent with the national standards and other provisions of federal law. Yet the Magnuson-Stevens Act allows NMFS only ninety days in total (including sixty days for public comments and thirty days for review of those comments) in which to decide whether to approve submitted plans. While the exigencies of fishery management dictate as speedy a review as possible, the review period often is too short to permit a thorough and adequate review. If NMFS disapproves all or part of an FMP, moreover, the plan returns to the councils, which enjoy unlimited time to amend and submit a revised plan. In deciding whether to reject a management measure, NMFS therefore must balance the costs of approving an inadequate measure with the possible costs of delaying needed action.

Not surprisingly, NMFS seldom has disapproved submitted FMPs. In order to assess the rate at which NMFS has disapproved council measures, we examined the *Federal Register* for all actions by NMFS since 1980 approving or disapproving an FMP. Because the Magnuson-Stevens Act does not require NMFS to publish such actions in the *Federal Register*, we also used the Freedom of Information Act to request copies of all "Section 304(a)(2) letters" sent by NMFS to the councils in the six-year period between 1997 and 2002. Under section 304(a)(2) of the Magnuson-Stevens Act, NMFS must send such a letter, explaining its reasoning, to any council whose FMP it rejects or partially accepts.

The two studies show that disapprovals of council management measures are rare. Between 1980 and 2000, NMFS partially disapproved only 62 of approximately 860 proposed plans, amendments, or annual specifications — resulting in a partial disapproval rate of 7 percent.

This figure, moreover, overstates the actual degree to which NMFS disapproves specific council decisions. FMPs can include scores of individual management measures, and partial disapprovals may remand only one or two of these measures. The annual specification for the Pacific groundfish fishery, for example, contains well over 100 management measures: annual catch quotas for more than 100 species of fish, as well as seasonal restrictions, area restrictions, and gear restrictions.

In order to more accurately assess the rate of disapprovals, we therefore examined the rate at which NMFS has disapproved the individual management measures that are contained in each plan, amendment, or specification. For purposes of our study, an "individual management measure" is a provision in a management document aimed at controlling a particular fishing or fish processing activity. Parsing each plan into its individual measures was not simple, and necessarily involved some judgment. We therefore took a conservative approach that erred in favor of finding a high rate of NMFS disapprovals.

Using this conservative approach, we determined that each plan, amendment, or specification during the period studied contained on average approximately twenty individual management measures. We then looked at each NMFS disapproval since 1980 and found that, when it disapproved a plan, NMFS on average disapproved slightly more than one measure each time. In 51 of the 62 cases, NMFS disapproved only one individual management measure. During the study period, therefore, NMFS disapproved at best 0.4 percent of the individual management measures submitted by the councils — or only one in every 250 measures.

Formal disapproval of a management measure is not the only way for NMFS to oversee council decision-making. A voting representative from the agency sits on each council. According to one state representative on the New England Council, this seat is quite "powerful" because the NMFS representative can warn a council that NMFS is likely to reject a particular management measure if it is not modified. While the council is not obligated to heed these warnings, such advice may have some effect on the final vote. In practice, however, the low rate of NMFS disapprovals undermines the effect of such a warning on council decisions. In the king mackerel case study (Box 7), for example, the NMFS delegate voted against the proposed quota on the ground that it violated the Magnuson-Stevens Act. The regional administrator later approved this same quota.

In three limited situations, NMFS has the authority to draft federal management plans. As already noted, NMFS can prepare a "secretarial plan" when a regional council fails to write an FMP for a fishery that "requires conservation and management" or does not make changes to a plan that NMFS has not fully approved. NMFS also may write emergency regulations or interim measures for a fishery when "needed to reduce overfishing." Finally, NMFS is obligated to write a rebuilding plan for a fishery when a council fails to do so within a year of being notified that the fishery is overfished. In the history of the Magnuson-Stevens Act, however, NMFS has rarely used any of this authority to create and implement a plan or management measure over the objection of the regional councils. In each of the three situations, a council must effectively grant NMFS jurisdiction to write a plan by abdicating its primary responsibility.

If NMFS does not effectively oversee council decision-making, what of judicial review? While federal courts are in a position to "disapprove" council actions, judicial oversight is limited. First, courts will not review a council action unless a plaintiff files a lawsuit challenging the legality of the action. And lawsuits are costly, time-consuming, and complex. To file a lawsuit, plaintiffs must have standing to bring the case, must have significant funding, and must have been closely following the often-complicated administrative proceedings. Plaintiffs are further constrained by time: a plaintiff has only thirty days in which to challenge an NMFS approval. While the number of such lawsuits has increased over the past ten years, there are not nearly enough plaintiffs and resources to review the vast majority of council actions.[66]

"YOU CAN'T LEGISLATE AGAINST APATHY."

— COUNCIL MEMBER

Even when a lawsuit is filed, judicial review of the NMFS decision is narrow. Courts will overturn an NMFS decision when it is found to be "arbitrary and capricious." This is a very unusual finding, and it is reserved for cases in which the agency's actions are clearly egregious. On the basis of extensive precedent, courts provide great deference to agencies, especially where legislative standards are broad and the science is complicated and uncertain.[67]

Neither NMFS oversight nor judicial review, in summary, is designed as an effective substitute for good decision-making by the councils. Both agency review and judicial review are fail-safe systems designed to catch and remedy the occasional error. They cannot cure the institutional problems that currently plague the councils' work.



OTHER ISSUES

In addition to the central problems discussed earlier, several other factors undermine the councils' ability to manage the nation's fisheries. First, the council process discourages broad national participation in fishery decisions. Fishery management is complicated, and the process by which decisions are made is often opaque. Decision-making is decentralized, requiring interested members of the public to follow processes in multiple councils, each with slightly different procedures. Even though the general public has opportunities to comment on council decisions by going to council meetings or submitting written comments, the process seems inaccessible to much of the public. The widely held perception that, because of conflicts of interest, the councils are predisposed to discounting views other than those of their fishing constituents further discourages public participation.

"A SPECIFIC QUOTA OF SEATS SHOULD BE HELD BY PEOPLE WITHOUT FISHING INTERESTS."

— COUNCIL MEMBER

A second problem arises from the limited time and resources available for council decision-making. Council members — almost all of whom hold full-time jobs elsewhere — can attend only a handful of short meetings each year, during which they must assimilate a great deal of information and make decisions with significant ecological and economic consequences.

Finally, the council process reduces accountability to the public. While councils make the important management decisions, only NMFS must formally respond to public comments regarding management. Furthermore, the "shared" authority of the councils and NMFS blurs responsibility. Because neither NMFS nor the councils are clearly responsible for management successes or failures, pressure to improve fishery management is diluted.

PUBLIC PARTICIPATION

There are two ways for the public to provide input into council decision-making. First, most council meetings and panel meetings are open to the public. While the councils are not subject to the public participation requirements of either the Federal Advisory Committee Act or the Administrative Procedure Act, the Magnuson-Stevens Act requires that members of the public be allowed to speak *or* submit written comments at all meetings. Although it is not required, the councils customarily schedule a time at meetings during which members of the public can address the council and the audience. Second, the public can submit written comments during the "notice and comment" period that follows publication of the proposed federal regulations. NMFS is legally obligated not only to publish proposed regulations in the *Federal Register* but also to respond to the public's written comments. In contrast, even though the councils draft the proposed regulations, however, the councils are not obligated to respond to any written comments submitted by the public.

Despite the limitations, almost 70 percent of the council members surveyed believed that the public had an adequate opportunity to provide input into council decisions. According to one governmental member, "There are numerous opportunities for public participation in the Council process. This is one of the most transparent processes I have ever worked under." A state representative similarly noted that council decision-making is a "very open, slow



moving process with tons of paper shipped out to anyone who wants it." One council member argued that

> the Council structure is far more open, for example, [than] the US Forest Service, NPS [National Park Service], BLM [federal Bureau of Land Management] decision processes that are essentially "in-house" with chief of staff and the Superintendent making all the decisions. The Council process exposes this for public scrutiny to a much higher degree than other agency processes. The NMFS must still, after receiving advice at the regional level, process and manage the decision through the normal agency processes. This gives the public more than a double-dip in terms of involvement.

Few of the interviewed council members, however, believed that the public took adequate advantage of existing opportunities to comment on council decisions. In responding to the survey, only 22 percent of council members reported that they believed the public took full advantage of available opportunities. Some council members attributed the low level of public participation to indifference and lethargy. "People who have an interest and want to take the time are involved, those who do not are not involved." Or, as another council member pithily put it, "You can't legislate against apathy." On the basis of our study, however, we believe that other institutional factors are also at work.

While there appear to be sufficient opportunities for the public to become involved in the council process, there are several significant impediments to such involvement. First, the public must actually know about the meetings and be able to get to them. Although fishery management is of national importance, the council system is decentralized, and councils often do not meet in large population centers. Second, the process by which the councils make their decisions is complex and lengthy, involving multiple advisory groups and steps. Unpaid participants find it difficult, to say the least, to follow the complex proceedings carefully enough and for long enough to provide meaningful, specific input at the correct stages. Third, the fishing industry's dominance of the councils dissuades participation by those outside the fishing industry. Many members of the public see little reason to participate in a process when the outcome appears to be predetermined or when they believe that their views are likely to be discounted.

A number of the council members who responded to our survey acknowledged the existence of some or all of these problems. According to one appointed council member, it is "often difficult to attend meetings due to costs." Another council member suggested that the "public is generally mystified by the process" and that the long-drawn-out nature of the process makes it more difficult to participate. One member of the Gulf Council also suggested that the council does not give much weight to public input when it is provided. After reporting that the public finds it difficult to participate because of travel and other costs, the council member continued: "Even more disconcerting, public testimony really doesn't seem to weigh too heavily with the Council." For this reason, the council member was not surprised that there was little active public participation.

It is not only members of the general public whose voices sometimes are not heard. Although one of the primary purposes of the councils is to assure fishermen that they have a say in fishing decisions, the system does not necessarily provide it. Several council members reported that fishermen do not participate as fully as they might in council proceedings because, to use the words of one council member, they "do not feel that they're part of the process." A number of these council members also reported that they believed that the fishermen "have a legitimate complaint" about the process.

"SCRAP CURRENT LAW AND PROCESS-RELATED REGS AND START OVER AGAIN. STOP TRYING TO FINE TUNE THE LAST FINE TUNING."

— COUNCIL MEMBER

"EVEN MORE DISCONCERTING, PUBLIC TESTIMONY REALLY DOESN'T SEEM TO WEIGH TOO HEAVILY WITH THE COUNCIL."

— COUNCIL MEMBER

PROCESS AND RESOURCE CONSTRAINTS

In managing the nation's coastal fisheries, the councils must meet a tight schedule when putting into place the appropriate management measures for the following year. Because underlying scientific and economic information is continuously being updated, the councils must revise management measures accordingly. This schedule can

"ALL TOO OFTEN, EXTREMELY COMPLEX ITEMS ARE QUICKLY DISCUSSED AND VOTED ON IN AN EFFORT TO GET THROUGH AN AGENDA AS QUICKLY AS POSSIBLE."

— COUNCIL MEMBER

force the councils to make decisions whether or not they have had ample time to consider them.

Despite the tight regulatory schedule and significant workload, council membership is only a part-time job. Almost all council members hold full-time jobs elsewhere and are able to focus on fishery management only during council meetings. The councils meet four times each year for, at most, a week at a time. This means that council members are working on fishery management for fewer than thirty days each year. Given the complex nature of the decisions that must be made, and the large amounts of economic and scientific information that must be assimilated, the temporal and human resource constraints make it difficult for council members to engage in careful and well-considered decision-making.

Many members agree that they have insufficient time and resources to carry out the responsibilities they are given. In our survey, several members specifically reported that the councils had too much to handle in the short periods of time they met. As a result, councils sometimes had to simplify their analyses. "All too often," one council member reported, "extremely complex items are quickly discussed and voted on in an effort to get through an agenda as quickly as possible."

ACCOUNTABILITY

Several council members who participated in our survey worried that the councils were not sufficiently accountable to the public for their management actions. The most specific concern focused on the council's voting system. As one former council member noted, most councils do not use roll call votes, so the public cannot determine later (or perhaps even at the time) how each council member voted. As a result, the council member concluded, "no one is accountable" for the decisions that are made. Because of exactly this concern, major federal regulatory agencies such as the Securities and Exchange Commission and the Federal Trade Commission record individual votes for significant actions. When forced to openly record their individual votes, members of a commission or committee may take greater responsibility for and care in their decisions.

The problem of accountability, however, extends beyond the council's voting method. The division of responsibility between the councils and NMFS also undermines the accountability of both organizations. As discussed earlier, the councils are responsible for writing the management plans and regulations, and NMFS is responsible for reviewing the plans' consistency with the Magnuson-Stevens Act and for implementing the regulations. This shared responsibility clouds ultimate accountability for failures in fisheries management. When two organizations share responsibility for an action, each of the organizations can blame the other for breakdowns, and neither organization may feel accountable for solving the problems.

Further undermining accountability, the councils' involvement in fisheries management officially ends after they have submitted proposed plans and regulations to NMFS. This partially shelters the councils from public disapproval of their actions. While the councils must provide for public participation, federal law does not require them to respond formally to public comments on their plans or regulations. NMFS, by contrast, must publish the proposed plans and regulations in the *Federal Register*, collect public comments, and respond to those comments. Members of the public who believe that a plan or regulation violates the Magnuson-Stevens Act may sue NMFS, not the councils. NMFS and other federal agencies, not the councils, are responsible for implementing the plan.

RECOMMENDATIONS

So what should the federal government do in response to the problems that we have outlined? Although some council members argue that the regional councils perform well despite their warts, the United States can and must do far better. Both the serious character of many of the councils' problems and the need to rebuild the nation's fisheries demand more than tinkering at the edges. The councils' balance is seriously askew; potential conflicts of interest are widespread and obvious; visibility and accountability to the American public at large are low. The problems are sufficiently fundamental and obvious that many council members with whom we talked, both voting and nonvoting, both governmental and appointed, reported there is a need for change. As one council member stated when asked which reforms were needed, "Scrap current law and process-related regs and start over again. Stop trying to fine tune the *last* fine tuning." With more than a third of American fisheries in need of rebuilding and over a quarter still being overfished, the nation needs to ensure that it has the most effective system in place to evaluate and manage its fisheries.

The question is how to reform the current management structure. The regional councils, as discussed in the first part of this report, face a variety of different problems. In thinking about reforms, however, the key is to focus on the most significant and basic problems — the tethering of conservation and allocation in a way that places pressure on the councils to relax conservation measures; the narrow perspectives represented on most councils; and the potential conflicts of interest that current law leaves largely unrestrained. If the councils are to be more effective in their conservation mission, reforms must solve these paramount problems. And only Congress can enact the needed reforms.

SEPARATING CONSERVATION AND ALLOCATION

The most important reform would be to separate conservation and allocation decisions, leaving allocation decisions in the hands of the councils but giving responsibility for conservation decisions to a separate governmental entity. As discussed in Box 9, ours is not the

Box 9:

PREVIOUS STUDIES OF THE COUNCIL SYSTEM

Studies of the council system began within a year of the passage of the Magnuson-Stevens Act. In 1977, a report to Congress written by the three interstate fishery management commissions recommended, among other things, that the act be amended to provide for more balanced council membership. Since that time, governmental agencies, scientific and environmental organizations, and academics have conducted more than thirty studies, an average of more than one per year.

In these studies, the most frequently made criticisms of the councils are that (1) they have failed to prevent overfishing; (2) they lack accountability; (3) they do not represent all legitimate interests and viewpoints; (4) they are hindered by ubiquitous conflicts of interest; (5) they favor short-term gains over long-term benefits; that is, they are better at encouraging development than they are at conservation; (6) they do not view themselves as trustees of fisheries resources; (7) they often yield to pressure from fishermen to raise quotas; and (8) they are not particularly well suited to the task of science-based decision-making.

The authors of prior reports have suggested five ways to solve these problems. First, more "environmental representatives" should be appointed to the councils. Second, council members should be subject to stricter conflict-of-interest rules. Third, NMFS should take a more active role in overseeing and reviewing council decision-making. Fourth, the language of the National Standards should be tightened to narrow the councils' discretion in carrying out the conservation mandate of the act. Finally, Congress should take the responsibility of conservation decision-making away from the councils and give it to a federal agency.

One of the most important studies was the 1986 Calio Report, prepared by eleven fishing experts at the request of Dr. Anthony J. Calio, then administrator of NOAA.* In its principal finding, the Calio Report concluded that fishery management would "be markedly improved by a clear separation between conservation and allocation decisions." When the same entity has responsibility for both decisions, the report found, "the pressures are always to add more effort to serve the interests of more users." The Calio Report therefore recommended that "NOAA set ABCs [allowable biological catches] for regional fisheries at the national level, on the basis of the best scientific information currently available" and using local and regional expertise. NOAA's decision-making would be subject to all the standards of good government, including the procedures of the federal Administrative Procedure Act. The regional councils would then make the allocations, which could not exceed the ABCs.

The Calio Report also concluded that the nomination process for appointed members of the councils, under which governors nominate three people, must be changed "to assure the selection of people who are capable of making knowledgeable, equitable and representative fishery management decisions." The report recommended inviting open nominations by any interested groups or individuals, including governors, within a council's geographic jurisdiction. A nine-member review board would then evaluate the nominees and, for each position to be filled, "certify to the Secretary of Commerce the three best qualified nominees."

* U.S. Department of Commerce, *NOAA Fishery Management Study* (Washington, DC: U.S. Department of Commerce, National Oceanic and Atmospheric Administration, June 30, 1986).

first study to conclude that conservation and allocation decisions should be separated and made by separate governmental agencies. A 1986 study commissioned by the administrator of NOAA (commonly known as the "Calio Report") reached an identical conclusion, recommending that NMFS set quotas on a national level for regional fisheries and that the councils then allocate the quotas (or a lower catch level if the councils deemed it appropriate) among local fishing interests.[68] This recommendation was recently echoed by the Pew Oceans Commission.[69] We agree with the Calio and Pew Commission reports that conservation and allocation should be separated, although having NMFS set the quotas is only one of several options for relocating responsibility for the conservation decisions. As discussed in the first part of this report, having the councils make both conservation and allocation decisions creates unnecessary pressure to relax conservation standards. Many of the other problems discussed in this report would either disappear or become easier to resolve if the councils were responsible only for allocation decisions. As discussed in Box 10, Alaska's fishery management has benefited from a similar division of conservation and allocation decision-making between state agencies.

There are no compelling reasons, moreover, why the councils should make conservation decisions. As explained in Box 11, members of the fishing industry can provide useful input into conservation through other mechanisms, without having ultimate authority over conservation decisions. There are compelling arguments, by contrast, for having those individuals with relevant scientific expertise and training in risk assessment and risk management involved in conservation decision-making. There also is a strong case to be made for making conservation decisions at a national, rather than a regional, level. Coastal fisheries are a national resource, and the entire country has an interest in ensuring their sustainability. As discussed earlier, the council system, by decentralizing conservation decision-making, undermines active public participation in fisheries conservation.

The councils, however, could be effective institutions for making allocation decisions. The way in which quotas and other fishing rights are allocated among members of the

Box 10:

THE ALASKA SYSTEM: BENEFITS OF SEPARATING CONSERVATION FROM ALLOCATION

A desire for "home rule" of its fisheries was a driving force behind the Alaska statehood movement. In the Alaska Statehood Act of 1958, Congress conditioned the transfer of fisheries management authority from the federal government on Alaska's design of an effective system that would conserve the state's fisheries in a manner consistent with "the broad national interest."

Alaska eventually developed a system headed today by a board of fisheries. The Alaska Board of Fisheries works with a state agency, the Alaska Department of Fish and Game (ADF&G), to manage Alaska's fisheries resources from shore out to three nautical miles. The Board of Fish, as it is known, consists of seven members appointed by the governor and confirmed by the legislature. The board's current membership includes two retired ADF&G employees, two representatives of commercial fishing interests, one processor representative, one sportfishing representative, and one representative of native Alaskan interests.

Under Alaskan law, all the substantive management authority is vested in the Board of Fisheries. The board is responsible for setting quotas, establishing open and closed seasons, and allocating the quota among users. ADF&G's primary statutory responsibilities are to perform scientific research in support of fisheries management, make management recommendations to the board, and implement and enforce board regulations.

In practice, however, Alaska separates conservation and allocation decision-making, with the ADF&G determining the quota and the board then allocating the quota among fishermen. The Board of Fisheries almost always accepts the ADF&G's conservation recommendations. The board's deference to the ADF&G in this regard has been so complete that many of the ADF&G's own personnel are under the impression that it is the ADF&G, not the board, that has formal authority to set catch limits.

The ADF&G's commissioner, Frank Rue, believes that Alaska's system is "a model for success" because of the separated functions. According to Rue, "[The board] makes allocation decisions, and the [ADF&G] gives the board information on how many fish are available, tells it what management strategies are possible, and performs in-season management to make sure any surplus resource can be harvested."*

Rue is correct that the split management system has helped ensure effective conservation. In 2001, the Marine Stewardship Council certified the Alaska salmon fisheries — the source of most of the world's ocean-caught salmon and the largest employer in the state — as sustainably managed, one of the first fisheries in the world so certified.

* Testimony of Frank Rue to the Alaska House Resources Committee regarding HB 216, April 2, 2001.

fishing community, in most cases, is of far greater regional than national interest and importance. Regional councils, therefore, can enable those with the greatest stake in allocation decisions to participate more effectively in those decisions. Members of the fishing industry, moreover, often have specialized or localized knowledge that makes them well qualified to make many allocation decisions. Reforms are needed to ensure that councils do a fair and effective job of allocation, but, with reforms, councils could be valuable institutions for making allocation decisions.

In separating conservation and allocation, Congress will need to make several decisions. First, what body should be responsible for making conservation decisions? Although NMFS is an obvious candidate, Congress might also consider creating a new institution, such as an interagency scientific panel. The important criteria are that the decision-making be national, with significant scientific expertise and subject to the standard rules of good government. Second, Congress will need to provide some guidance on what constitutes a conservation, rather than an allocation, decision. Many conservation decisions have allocative impacts, and there is thus no bright line between conservation and allocation. The two functions are sufficiently separate, however, that they can be effectively split. In designing a new management system, Congress can draw on the lessons of other effective systems that separate protection and allocation, such as the federal Clean Air Act (see Box 12).

BROADENING COUNCIL REPRESENTATION

Regarding other potential changes, the most commonly recommended change suggested by the council members whom we surveyed was to expand the range of views represented on the councils. Some council members simply suggested, without specifics, that ways be found to represent more nonfishing interests on the councils. Other council members proposed more concrete changes to council representation. One governmental member, for example, suggested that council votes be split three ways, with commercial, recreational/charter, and environmental/academic interests each getting one-third of the votes. Another suggested that governors "be required to submit more slates of nominees" and that councils have "a specific quota of seats to be held by people without fishing interests." One nonvoting council member suggested that Congress

Box 11:

ENSURING FISHERMEN'S INPUT INTO MANAGEMENT

Fishermen can provide valuable input into fisheries management. Fishermen possess unique knowledge, particularly concerning the business of fishing. Policy makers can and should use this knowledge to make management more efficient, effective, and fair. Further, fishermen's involvement in management can increase the chances of success by creating greater "buy-in" to fisheries regulations. The more familiar fishermen are with the process by which regulations are created, the more likely they will be to support and comply with those regulations. Because fisheries rules are difficult to enforce on the ocean, obtaining the greatest possible buy-in is imperative.



In 1976, fishing interests voiced these rationales in support of giving fishermen the powerful role they have in the regional councils. Since that time, it has become clear that putting fishermen in command of fishery management creates more problems than it solves. However, the rationales do support the involvement of fishermen in a variety of other ways that do not raise the same concerns but generate the same benefits.

In the United States and other countries, fishermen are involved from the outset of the management process in collecting data to be used in management. Most fisheries data come from records of what fishermen actually catch. Other data come from independent studies, many of which are conducted in collaboration with fishermen. Fishermen are also involved in the review of the stock assessments upon which management measures will be based. For example, the Pacific Council has created what is known as the STAR (stock assessment review) process. STAR panels, composed of fishing industry representatives and outside scientists, review and critique stock assessments that have been developed by NMFS scientists. Decision-makers also can draw on industry advisory panels for input on the socioeconomic impacts of proposed management measures and ways to mitigate these impacts. Finally, fishermen can be involved in the enforcement of management measures. In the British system, for example, fishermen pay for, and take turns manning, the enforcement vessels that patrol for fisheries violations.

might want to "consider a public-at-large seat or a representative from a mainstream conservation group as opposed to an environmental group," while another nonvoting member suggested replacing a state at-large position with "an environmental type entity." A third nonvoting governmental member also recommended that Congress "[a]dd a seat for the environmental community."

If conservation and allocation were split, and councils handled only allocation decisions, problems of over- and underrepresentation would become less important. But they still would remain an issue. A frequent complaint of the appointed council members who were surveyed was that some fishing interests on their council also were underrepresented.

Broadening the interests represented on the councils remains a crucial and essential reform so long as the councils remain responsible for conservation. In our study, several members of the New England Council, the only council to include a representative of a national conservation organization, emphasized the value of having environmental views included in their conservation discussions and deliberations. As discussed earlier, broader representation is likely to lead councils to consider a wider range of perspectives and to identify and evaluate a more extensive set of options — to "think outside the box." The public also is more likely to accept the decisions of councils that are more pluralistic.

Comprehensive representation, however, is easier to mandate than to achieve in practice. If federal law required all councils to include an "environmental" representative, for example, would a commercial fisherman who also served on the board of a local conservation organization count? Would the federal government be expected to evaluate the beliefs of prospective appointees or the positions of the organizations to which they belonged? And, if so, how would the federal government determine if an individual or organization was indeed "environmental," given that there is no agreed-upon litmus test?

Other efforts to ensure that particular agencies or committees include broad perspectives have often been unsuccessful. Alaska, as noted earlier, requires its governor to choose members of the Board of Fisheries "with a view to providing diversity of interest and points of view in the membership."[70] Yet studies suggest that environmental interests are

Box 12:

The Clean Air Act: National Standards and Local Implementation



The Clean Air Act (CAA) provides an example of a regulatory system in which environmental protection decisions are separated from decisions about allocation. The CAA is extremely complex, so only a simplified description is possible here. Under the CAA, the Environmental Protection Agency (EPA) is responsible for determining how clean the nation's air must be in order to protect human health. The EPA sets National Ambient Air Quality Standards (NAAQS), which establish numeric limits (usually expressed in terms of parts per million) on the amount of major air pollutants that can legally be present in the air anywhere in the country. The fifty states are then responsible for ensuring that air within their borders meets the standards established by the NAAQS. The states must write State Implementation Plans (SIPs) that explain how they will meet or maintain these standards. The EPA must approve the SIPs.

Although the EPA determines the national standards, the states enjoy broad discretion in determining how to achieve the standards. This discretion allows states to tailor air quality management measures to maximize economic efficiency. For example, in some regions it may be more practical to invest in mass transportation, while in other regions it may be cheaper to significantly reduce pollution from industrial sources. This discretion allows the states, rather than the federal government, to make allocative decisions about who should bear the burden of paying for emissions reductions.

Just as NMFS provides scientific information and funding to the councils, the EPA supplies technical and financial assistance to the states to aid them in meeting air quality standards. The difference between the two systems is that the Magnuson-Stevens Act allows the councils to set the numeric limits on resource use, while the Clean Air Act requires that such limits be established by the federal government. The rationale behind the use of NAAQS is that healthy air is healthy air in every part of the country. By contrast, the Magnuson-Stevens Act allows each council, within broad national standards, to decide exactly how healthy it wants fish stocks to be.

Box 13:

What Do Overfishing and Overgrazing Have in Common?

Like the Magnuson-Stevens Act, the Taylor Grazing Act (TGA) was enacted to bring previously unregulated areas under federal management and promote conservation in those newly "enclosed" areas. Both laws faced similar challenges from the start. Like fisheries in 1976, rangelands in 1935 were in very poor condition. The federal range had been decimated in the first three decades of the twentieth century by a combination of overgrazing and drought, leading eventually to the tragedy known as the dust bowl. By 1935, only about 16 percent of federal rangelands were in "excellent" or "good" condition, while nearly 40 percent were in "poor" health.

Like fishermen in 1976, ranchers in 1935 were independent-minded, financially dependent on access to natural resources, and unaccustomed to regulation of any kind, working in rugged environments far from Washington, D.C., but not without substantial political muscle on Capitol Hill. In other words, ranchers were in general neither receptive to regulation nor easily regulated. The TGA contained vague conservation standards reminiscent of the National Standards found in the Magnuson-Stevens Act. For example, the TGA required the Department of the Interior "to stop injury to public grazing lands by preventing overgrazing and soil deterioration. . . ."

As initially designed, local branches of Interior's Grazing Service were to implement the TGA. The first director of grazing, Farrington Carpenter, however, felt strongly that users of the federal rangelands should have a strong role in implementing the TGA. He thus took it upon himself to create an extra-statutory system of institutions he called the Grazing Advisory Boards. (Congress amended the TGA in 1939 to incorporate the concept of advisory boards into the act.) Each grazing district elected a board from among ranchers in the district. These boards were to make recommendations to Interior on conservation and management measures for the district. Although the TGA anticipated that Interior would make the ultimate management decisions in cooperation with stockmen, as well as with state wildlife and land officials, Carpenter's system of boards included only stockmen. State wildlife and land officials were not represented. Carpenter bragged that the Grazing Service followed Grazing Advisory Board recommendations 98.3 percent of the time.

The TGA and the Grazing Advisory Boards made little progress in improving the condition of federal rangelands. In 1936, as noted, only 16 percent of those lands were in "excellent" or "good" condition; by 1975 the figure was still only 17 percent. These numbers did not begin to improve until after the passage of the Federal Land Policy and Management Act (FLPMA) in 1976. FLPMA subjected the Grazing Advisory Boards to the Federal Advisory Committee Act (from which the regional fishery management councils are still exempt) and adopted a new multiple-use standard for managing rangelands. By 1984, more than 36 percent of rangelands were in excellent or good condition, although 60 percent remained in fair or poor condition.

In 1994, Secretary of the Interior Bruce Babbitt eliminated the Grazing Advisory Boards as part of his rangeland reform initiative. A new system of twenty-four Resource Advisory Councils replaced the boards. By regulation, the new councils must have equal representation from three groups: extractive users (ranching, mining, timber, recreation); environmental and cultural interests (environmental groups, archeological groups, wild horse and burro groups); and other interests (state and local government, public-at-large, and academics). The Secretary of the Interior appoints these members upon nomination of governors of affected states.

Mandating broader representation, however, is easier to do on paper than in practice. According to Professor Joseph Feller of Arizona State University, "[F]or most of the five years since its inception, Arizona's BLM-appointed Resource Advisory Council has had no representative from any of the state's environmental organizations, and several of the Resource Advisory Council's members who nominally represent other interests are ranchers or their advocates or associates." * Perhaps as a consequence, the condition of rangelands has not changed very much since 1984. In 2001, BLM reported that 34 percent of inventoried lands were deemed to be in excellent or good condition.

* 31 Envtl. L. Rep. 10021 (2001).



still underrepresented.[71] In the 1990s, the Department of the Interior tried to reform the boards that controlled grazing policy on the federal public domain and that, like the regional fishery management councils, historically were dominated by industry (see Box 13). Although the reform has broadened the represented viewpoints, observers again believe that industry dominance remains largely unchecked.[72]

The Federal Advisory Committee Act (FACA) also provides a valuable lesson on the difficulty of ensuring broad representation on governmental bodies. As discussed, one of the main purposes of FACA was to afford inclusive representation on federal advisory groups. FACA therefore requires that the "membership of [an] advisory committee ... be fairly balanced in terms of points of view represented."[73] No plaintiff, however, has ever successfully challenged the makeup of a federal advisory committee on the ground that its membership is not "fairly balanced."[74] Some courts have announced that the issue is "nonjusticiable" — meaning that the courts have decided that they are ill-equipped to police the requirement and must defer instead to the judgment of the appointing body.[75]



If Congress chooses to address the representativeness of council membership, it would do best either to expand the categories of mandatory governmental members or to change the process by which appointed members are selected. Both approaches are more likely to succeed than would an attempt to specify the political beliefs of some or all council members. Voting governmental representatives on the councils, as described earlier, currently include representatives only of state fishery agencies and NMFS. Congress could expand the viewpoints on the councils by awarding votes also to state and federal agencies with broad environmental mandates, such as state and federal environmental agencies and the federal Fish and Wildlife Service. Although many such agencies do not directly manage fisheries, they generally have extensive experience in evaluating similar scientific information, determining the appropriate levels of protection, and implementing regulations.

In the case of appointed members, moreover, each governor often believes that he or she must use nomination opportunities to choose council members who will strongly support the local fishing industry. If a governor does not do so, other states may gain an important edge in allocation decisions. So long as governors make the nominations and worry about allocation issues, they will have an incentive to nominate fishing industry representatives no matter what guidelines Congress provides.

To achieve a more representative set of appointed members, Congress therefore might want to modify the appointment process. Congress, for example, could require governors to submit lists of nominees much larger



than the current lists of three. A requirement that a governor submit a list of ten people, for example, would increase the chances of citizens outside the industry being nominated and might increase the ability of the Secretary of Commerce to create balanced councils. Congress could also require that some nominations be made by an independent body, such as the National Academy of Sciences, rather than by the governors. The earlier mentioned Calio Report (discussed in Box 9) recommended that a nine-member "review board" collect nominations from interested groups or individuals and then recommend the top three nominees for final selection by the Secretary.

ELIMINATING OR REDUCING CONFLICTS OF INTEREST

In suggesting reforms, a number of council members also focused on the value of eliminating potential conflicts of interest. As discussed earlier, there is no legitimate justification for exempting the regional councils from conflict-of-interest standards that apply to other regulatory agencies and are one of the foundations of good government.

One option would be to prohibit those holding financial interests in regulated fisheries from being appointed to a council, and to broaden the definition of "financial interests" to include lobbying for members of the fishery. One industry representative, for example, suggested that the law should encourage "people to serve without financial ties but with depth of background." This option would result in much different-looking councils, although it is unclear whom these disinterested council members would be.

Another option would be to lower the recusal threshold. A nonvoting member suggested that industry members should remain on the councils but be barred from voting "whenever there is economic gain or loss at stake that directly affects (or gives the perception to directly affect) that person's business or those of friends, family, clients, or close constituents." While it is possible that such a measure would change voting outcomes, it might also simply result in more frequent "logrolling" behavior — a "you scratch my back and I'll scratch yours" system.

The choice between these options depends in part on whether councils continue to handle both conservation and allocation decisions or are limited only to allocation. So long as the councils continue to make conservation decisions, limits need to be placed on council membership. Otherwise, as just suggested, "logrolling" could continue to undermine effective conservation measures. If councils make only allocation decisions, stricter recusal rules may adequately deal with the conflict-of-interest problem. But some form of action, either restricting membership or strengthening recusal rules, would need to be taken. Council members who participated in our surveys were as concerned about the effects of conflicts on allocation decisions as they were about their effects on conservation.

"THE LAW SHOULD ENCOURAGE PEOPLE TO SERVE WITHOUT FINANCIAL TIES BUT WITH DEPTH OF BACKGROUND."

—INDUSTRY REPRESENTATIVE



Conclusion: Implementing the Needed Changes



The regional fishery management councils, as currently structured, are unlikely to solve the problems facing coastal fisheries in the United States. The mixing of allocation and conservation decisions, the relatively uniform perspective of council members, the failure to avoid and regulate conflicts of interest among council members, and various other institutional deficiencies conspire to undercut effective protection of the fisheries. Until these defects are addressed, the nation is likely to remain disappointed in the Magnuson-Stevens Act and worried about the state of the nation's fisheries.

So who can make the needed changes? NMFS and the Secretary of Commerce by themselves can take a number of steps that would help to improve decision-making under the Magnuson-Stevens Act. First, NMFS could tighten the conflict-of-interest regulations. Under the act, a council member must recuse himself or herself if "there is a close causal link between the Council decision and an expected and substantially disproportionate benefit to the financial interest of the affected individual relative to the financial interests of other participants in the same gear type or sector of the fishery."[76] NMFS currently interprets "substantially disproportionate" to mean that a member must own or represent more than 10 percent of a gear type or sector.[77] A lower threshold would reduce the most direct conflicts of interest.

The Secretary of Commerce also could make a greater effort to improve council diversity. The Secretary could strive to select more diverse candidates from those lists that the governors currently submit. The Secretary, moreover, could work more closely with governors to encourage the governors to submit slates containing nominees with a wider range of perspectives and experience.

Finally, NMFS could improve council decision-making by changing the way in which it communicates scientific information to the councils and by increasing the intensity of its oversight. NOAA science centers and stock assessment panels currently provide most councils with a range of recommended catch levels, giving the councils substantial discretion in setting limits. The science centers and stock assessment panels could reduce that discretion by providing more specific recommendations. NMFS also could hold the councils' decisions to heightened scrutiny under the national standards and other substantive provisions of the Magnuson-Stevens Act.



The Magnuson-Stevens Act, however, limits the ultimate extent to which NMFS and the Secretary of Commerce can solve the deficiencies that this report identifies. The act, for example, explicitly permits



council members to participate in discussions about fishery decisions in which they have a vested financial interest. The act also prohibits NMFS from invalidating decisions on which conflicted members have voted. And by requiring that all members be chosen from lists submitted by the governors of local states, the act also limits the ability of the Secretary of Commerce to increase council diversity. In choosing appointed members, the Secretary must choose one of the three candidates nominated by the relevant governor. Finally, as discussed earlier in this report, the act also makes it difficult for NMFS to impose a regulation on a council that is not predisposed to accept it.

Thus, Congress must step in and reform the decision-making structure of the Magnuson-Stevens Act if the nation's coastal fisheries are to be protected. As discussed earlier, the most valuable step Congress could take would be to separate the conservation and allocation decisions that the councils now make. The councils can play a valuable role in allocating fishing rights, but a separate national entity, with strong scientific expertise, should make the initial conservation decisions. Congress should also prescribe tougher conflict-of-interest requirements and provide for greater council diversity. Although these latter changes are essential if the councils continue to make conservation decisions, they also are important to effective allocation decisions. By providing a strong decision-making structure, Congress can turn the vast promise of the Magnuson-Stevens Act into reality and ensure sustainable fisheries for future generations of American fishermen, consumers, and environmentalists.





NOTES

1. Association of the Bar of the City of New York, Special Committee on the Federal Conflict of Interest Laws, *Conflict of Interest and Federal Service* (Cambridge, MA: Harvard University Press, 1960), pp. 42–44.
2. Administrative Procedure Act, 5 U.S.C. §§ 551 et seq.
3. Federal Advisory Committee Act, 5 U.S.C. App. 2 (hereinafter FACA).
4. Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. §§ 1801 et. seq. (hereinafter FCMA).
5. Michael L. Weber, *From Abundance to Scarcity: A History of U.S. Marine Fisheries Policy* (Washington, DC: Island Press, 2002).
6. See, e.g., Cal. Const., art. IV, § 20; Mo. Const., art. IV, § 40(a).
7. La. Const., art. IX, § 7 (emphasis added).
8. Nev. Rev. Stat. § 501.171 (2003).
9. Tenn. Code § 70-1-201 (2003).
10. See, e.g., Mo. Const., art. IV, § 40(a).
11. Ark. Const., amend. 35, § 1.
12. Ind. Code § 14-10-1-1 (2003).
13. Stephen McIntosh Waste, "The Alaska Board of Fisheries: The Structure and Process of Decision-Making" (PhD diss., University of Washington, 1992).
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15. 1959 Stat. Laws of Alaska, ch. 24.
16. Alaska Stat. § 16.05.221.
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25. United States Congress, *A Legislative History of the Fishery Conservation and Management Act of 1976* (Washington, DC: U.S. Government Printing Office, 1976), p. 684 (hereinafter FCMA Legislative History).
26. FCMA § 302(b), 16 U.S.C. § 1854(b).
27. FCMA Legislative History, pp. 454–55.
28. See *Natural Resources Defense Council v. Daley*, 209 F.3d 747 (D.C. Cir. 2000).
29. 63 *Fed. Reg.* 24212 (1998).
30. 64 *Fed. Reg.* 69989 (1999).
31. FCMA § 304(a), 16 U.S.C. § 1854(a).
32. FCMA § 304(e), 16 U.S.C. § 1854(e).
33. FCMA § 303(a), 16 U.S.C. § 1853(a).
34. National Marine Fisheries Service, *Annual Report to Congress on the Status of Fisheries of the U.S.: 2002* (Silver Spring, MD: U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, 2003).
35. Ibid.
36. Food and Agriculture Organization of the United Nations, *The State of World Fisheries and Aquaculture, 2002* (Rome: Food and Agriculture Organization of the United Nations, FAO Fisheries Department, 2002).
37. National Marine Fisheries Service, *Annual Report to Congress.*
38. Barbara Stevenson, New England Council, quoted at http://www.habitatmedia.org/tran-stevenson.html.
39. See, e.g., P. E. Jones and P. H. M. P. Roelofsma, "The Potential for Social Contextual and Group Biases in Team Decision-Making: Biases, Conditions, and Psychological Mechanisms," *Ergonomics* 13, no. 8 (2000):1152; A. R. Flippen, "Understanding Groupthink from a Self-Regulatory Perspective," *Small Group Research* 30, no. 2 (1999):166; Michael A. Hogg and Sarah C. Hains, "Friendship and Group Identification: A New Look at the Role of Cohesiveness in Groupthink," *European Journal of Social Psychology* 28 (1998):323, 337.

40. See Garold L. Stasser et al., "Information Sampling in Structured and Unstructured Discussions of Three- and Six-Person Groups," *Journal of Experimental Social Psychology* 63 (1989):57, 67–78.
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51. 47 C.F.R. § 19.735-202 (2003).
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56. 5 C.F.R. § 5501.104 (2003).
57. 5 C.F.R. § 4001.103 (2003).
58. S. Rep. No. 92-1098.
59. H.R. Rep. No. 92-1017.
60. FACA § 2(b)(6).
61. House Committee on Merchant Marine and Fisheries, *Conflicts of Interest within the Regional Fishery Management Councils: Hearing before the Subcommittee on Fisheries Management,* 103rd Cong., 1st sess., 1994, p. 2.
62. FCMA § 302(j), 16 U.S.C. § 1852(j).
63. 50 C.F.R. § 600.235.
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APPENDIX — SUMMARY OF SURVEY RESPONSES

M – Mandatory member
A – Appointed member
NV – Non-voting member

1. Do you have formal education in fisheries science or a related field?

PACIFIC						NORTH PACIFIC						NEW ENGLAND				GULF OF MEXICO			
YES			NO			YES			NO			YES		NO		YES		NO	
M	A	NV	M	A	NV	M	A	NV	M	A	NV	M	A	M	A	M	A	M	A
4	3	2	1	4	0	1	3	3	1	0	0	3	5	0	3				
9			5			7			1			8		3		2		3	

2. Do you believe that different Council members represent different constituencies?

PACIFIC						NORTH PACIFIC						NEW ENGLAND				GULF OF MEXICO			
YES			NO			YES			NO			YES		NO		YES		NO	
M	A	NV	M	A	NV	M	A	NV	M	A	NV	M	A	M	A	M	A	M	A
4	7	2	1	0	0	2	3	3	0	0	0	3	7	0	1				
13			1			8			0			10		1		4		1	

3. How often do you find the scientific information you receive on a fishery to be sufficient for effective and well-informed Council decision-making?

PACIFIC						NORTH PACIFIC						NEW ENGLAND				GULF OF MEXICO			
ALWAYS			SOMETIMES NEVER			ALWAYS			SOMETIMES NEVER			ALWAYS		SOMETIMES NEVER		ALWAYS		SOMETIMES NEVER	
M	A	NV	M	A	NV	M	A	NV	M	A	NV	M	A	M	A	M	A	M	A
0	1	0	5	6	2	2	3	2	0	0	1	0	0	3	8				
1			13			7			1			0		11		5		0	

4. Do you believe that you have been provided with adequate training and other resources to evaluate the scientific information you receive?

PACIFIC						NORTH PACIFIC						NEW ENGLAND				GULF OF MEXICO			
ALWAYS			SOMETIMES NEVER			ALWAYS			SOMETIMES NEVER			ALWAYS		SOMETIMES NEVER		ALWAYS		SOMETIMES NEVER	
M	A	NV	M	A	NV	M	A	NV	M	A	NV	M	A	M	A	M	A	M	A
5	4	2	0	3	0	2	3	2	0	0	1	3	3	0	4				
11			3			7			1			6		4		3		1	

5. How often do you find the economic information you receive on a fishery to be sufficient for Council decision-making?

PACIFIC						NORTH PACIFIC						NEW ENGLAND				GULF OF MEXICO			
ALWAYS			SOMETIMES NEVER			ALWAYS			SOMETIMES NEVER			ALWAYS		SOMETIMES NEVER		ALWAYS		SOMETIMES NEVER	
M	A	NV	M	A	NV	M	A	NV	M	A	NV	M	A	M	A	M	A	M	A
0	1	0	5	6	2	0	2	0	2	1	3	0	0	3	8				
1			13			2			6			0		11		0		5	

6. Do you believe that you have been provided with adequate training and other resources to evaluate the economic information you receive?

PACIFIC						NORTH PACIFIC						NEW ENGLAND				GULF OF MEXICO			
YES			NO			YES			NO			YES		NO		YES		NO	
M	A	NV	M	A	NV	M	A	NV	M	A	NV	M	A	M	A	M	A	M	A
4	6	0	1	1	2	1	3	2	1	0	1	1	5	2	3				
10			4			6			2			6		5		2		2	

7. Compared with existing opportunities for public input, do you believe that there should be more opportunity for public input, less opportunity for public input, or that existing opportunities for public input are adequate (status quo, or SQ)?

PACIFIC									NEW ENGLAND								
MORE			LESS			SQ			MORE		LESS		SQ				
M	A	NV	M	A	NV	M	A	NV	M	A	M	A	M	A			
1	0	0	0	0	0	4	6	2	0	2	1	0	2	6			
1			0			12			2		1		8				

NORTH PACIFIC									GULF OF MEXICO								
MORE			LESS			SQ			MORE			LESS			SQ		
M	A	NV	M	A	NV	M	A	NV	M	A	NV	M	A	NV	M	A	NV
0	0	0	0	0	0	2	3	3	0	0	0	0	0	0	1	2	2
0			0			8			0			0			5		

8. Do you believe that the public takes full advantage of the existing opportunities to comment on Council activities?

	PACIFIC						NORTH PACIFIC						NEW ENGLAND				GULF OF MEXICO			
	YES			NO			YES			NO			YES		NO		YES		NO	
	M	A	NV	M	A	NV	M	A	NV	M	A	NV	M	A	M	A	M	A	M	A
	0	3	0	5	3	2	0	1	1	2	2	2	1	1	2	6				
		3			10			2			6			2		8		1		4

9. How important are each of the following factors in helping to formulate your decisions on fishery management issues? (1 = most important, 9 = least important.)

Factor Rank

____ Comments from fishermen
____ Comments from other members of the public
____ Scientific recommendations
____ Economic impact assessments
____ Comments from environmental groups
____ Opinions of other Council members (specify)
____ Personal experience/knowledge

10. Do you believe that the media coverage of your Council's fishery management decisions has been fair to the Council?

	PACIFIC						NORTH PACIFIC						NEW ENGLAND				GULF OF MEXICO			
	YES			NO			YES			NO			YES		NO		YES		NO	
	M	A	NV	M	A	NV	M	A	NV	M	A	NV	M	A	M	A	M	A	M	A
	5	4	1	0	0	0	1	3	3	0	0	0	1	4	2	3				
		10			0			7			0			5		5		4		0

11. Do you believe that the fishing community is sufficiently aware of Council activities? If not, what should be done to increase awareness?

	PACIFIC						NORTH PACIFIC						NEW ENGLAND				GULF OF MEXICO			
	YES			NO			YES			NO			YES		NO		YES		NO	
	M	A	NV	M	A	NV	M	A	NV	M	A	NV	M	A	M	A	M	A	M	A
	3	5	0	2	1	2	2	1	3	0	2	0	2	5	1	3				
		8			5			6			2			7		4		4		1

12. Do you believe that the general public is sufficiently aware of Council activities?

	PACIFIC						NORTH PACIFIC						NEW ENGLAND				GULF OF MEXICO			
	YES			NO			YES			NO			YES		NO		YES		NO	
	M	A	NV	M	A	NV	M	A	NV	M	A	NV	M	A	M	A	M	A	M	A
	0	4	0	5	3	2	2	1	2	0	2	1	1	1	2	7				
		4			10			5			3			2		9		2		3

13. Have you ever felt that it was unfair for another Council member to participate in certain Council deliberations because he or she had a conflict of interest?

	PACIFIC						NORTH PACIFIC						NEW ENGLAND				GULF OF MEXICO			
	YES			NO			YES			NO			YES		NO		YES		NO	
	M	A	NV	M	A	NV	M	A	NV	M	A	NV	M	A	M	A	M	A	M	A
	1	1	1	4	5	1	0	0	3	2	3	0	0	4	3	3				
		3			10			3			5			4		6		2		2

14. Have you ever felt that it was unfair for another Council member to participate in certain Council deliberations because his or her friends, neighbors or clients had an interest in the deliberations?

	PACIFIC						NORTH PACIFIC						NEW ENGLAND				GULF OF MEXICO			
	YES			NO			YES			NO			YES		NO		YES		NO	
	M	A	NV	M	A	NV	M	A	NV	M	A	NV	M	A	M	A	M	A	M	A
	0	1	1	5	6	1	0	0	3	2	3	0	0	4	3	2				
		2			12			3			5			4		5		2		2

15. Have you ever considered recusing yourself from Council deliberations regarding a fishery in which you were active?

	PACIFIC						NORTH PACIFIC						NEW ENGLAND						GULF OF MEXICO					
	YES		NO		DON'T FISH		YES		NO		DON'T FISH		YES		NO		DON'T FISH		YES		NO		DON'T FISH	
	M	A	M	A	M	A	M	A	M	A	M	A	M	A	M	A	M	A	M	A	M	A	M	A
	0	3	4	3	1	1	0	3	0	0	2	0	1	2	1	5	3	1	0	1	0	1	1	0
		3		7		2		3		0		2		3		6		4		1		1		1

16. Have you ever considered recusing yourself from Council deliberations regarding fisheries in which your friends, neighbors or clients were active?

	PACIFIC						NORTH PACIFIC						NEW ENGLAND				GULF OF MEXICO			
	YES			NO			YES			NO			YES		NO		YES		NO	
	M	A	NV	M	A	NV	M	A	NV	M	A	NV	M	A	M	A	M	A	M	A
	1	0	N/A	4	7	N/A	0	2	N/A	2	1	N/A	0	2	3	5				
		1			11			2			3			2		8		2		2

This appendix summarizes responses to those survey questions that require discrete rather than narrative answers.

ABOUT THE AUTHORS

Josh Eagle is director of the Stanford Fisheries Policy Project and lecturer in law at Stanford Law School. His research focuses on institutions and their role in the sustainable use of natural resources. Mr. Eagle has published articles on the economics of endangered species protection, the economic and ecological relationships between aquaculture and commercial fisheries, and problems and solutions in the regulation of marine fisheries. Prior to coming to Stanford, Mr. Eagle worked as an attorney for both the U.S. Department of Justice and the National Audubon Society. In addition to his law degree, he holds an M.S. degree in forest sciences.

Sarah Newkirk is an independent water law and policy consultant. She earned an M.S. degree in marine environmental science from the State University of New York at Stony Brook and a J.D. degree from Pace University School of Law. She served as law clerk to the Honorable Thomas P. Griesa, U.S. District Judge in the Southern District of New York. Ms. Newkirk was the first Frederick A.O. Schwarz Public Policy Fellow at the Natural Resources Defense Council in New York, where she worked on both marine issues and urban issues such as air and water quality. She was most recently a research fellow with the Stanford Fisheries Policy Project.

Barton H. Thompson Jr. is Vice Dean and Robert E. Paradise Professor of Natural Resources Law at Stanford Law School. He also is a senior fellow (by courtesy) at the Center for Environmental Science and Policy of the Stanford Institute for International Studies. Professor Thompson has published extensively on institutional issues infishing, water, and biodiversity policy; market approaches to environmental regulation, and constitutional aspects of environmental law. He is the author of *Environmental Law and Policy* (Foundation Press, 2003). Professor Thompson also currently serves on several governmental science advisory committees.

PHOTOGRAPHY

Photography courtesy of NOAA, National Oceanic and Atmospheric Administration,
U.S. Department of Commerce and Nova Development Corporation.

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WASHINGTON, DC

HCR

18

<TARGET><BILL>HCR 18</BILL><SUBJECT>HCR
18</SUBJECT><COMM>HFSH27</COMM></TARGET>

Sponsor Statement

House Concurrent Resolution 18
COMMERCIAL FISHERIES PROGRAMS

SPONSOR'S INTENT

HCR 18 calls on the Legislature to strengthen and support programs and resources in the state that assist the efforts of younger resident Alaskans to launch ownership-level careers in commercial fisheries.

The seafood industry is Alaska's largest private-sector employer and has been the economic mainstay in dozens of our communities for more than a century. Yet only a fraction of seafood harvesting businesses are Alaska owned. Nearly half of the Individual Fishing Quota shares issued for Alaska fisheries are held by non-Alaskans, and nearly one quarter of the limited entry permits issued for Alaskan fisheries are Outside owned. The financial and societal contributions resident fishers make to their home ports and hometowns are considerable; Alaska should do all it can to increase resident ownership of businesses harvesting fish in its waters.

In recent decades, the mean age of commercial fishing entry permit owners in Alaska has increased from just more than 40 years to nearly 50 years. This "graying of the fleet" is happening in part because younger Alaskans confront ever more daunting obstacles to acquiring fish harvesting operations.

Nowadays, the cost of entry into commercial fisheries on a diversified level sufficient to provide a satisfactory income for a skipper and crew is often more than $350,000. Such amounts are beyond the reach of most young Alaskans, who frequently lack the considerable credit histories necessary to secure large bank loans. Moreover, with the increase in limited-entry and rationalized fisheries in recent decades, running a successful fishing operation requires sharp business skills and the savvy to navigate complex state and federal regulatory systems.

HCR 18 recognizes there are many fine programs and agencies in the state whose goals include promoting strong resident commercial fisheries and aiding younger Alaskans' success in them. The resolution urges the Legislature to examine these efforts in order to determine how best they can be strengthened and focused to further the aspirations of young Alaskan fisheries entrepreneurs. Doing so will fortify one of the state's most important industries and the many communities—rural and urban alike—that benefit from it.

Prepared by the House Special Committee on Fisheries.

CS FOR HOUSE CONCURRENT RESOLUTION NO. 18(FSH)

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-SEVENTH LEGISLATURE - SECOND SESSION

BY THE HOUSE SPECIAL COMMITTEE ON FISHERIES

Offered:
Referred:

Sponsor(s): HOUSE SPECIAL COMMITTEE ON FISHERIES

A RESOLUTION

Relating to an examination of fisheries-related programs to facilitate the entry of young Alaskans into commercial fisheries careers and to collaboration with the University of Alaska fisheries, seafood, and maritime initiative.

BE IT RESOLVED BY THE LEGISLATURE OF THE STATE OF ALASKA:

WHEREAS the Alaska seafood industry employs more workers than any other private sector industry in the state; and

WHEREAS, to continue to thrive, the Alaska resident seafood industry will need future generations of Alaskans to engage in rewarding, ownership-level careers in the industry; and

WHEREAS the average age of a commercial salmon fishing skipper in the state has risen from approximately 41 years of age in 1980 to older than 49 years of age in recent years; and

WHEREAS the average age of an Alaska Peninsula salmon seine permit holder is 53.6 years, the average age of a Bristol Bay driftnet permit holder is 47.9 years, and the average age of a Southeast power troll permit holder is 53.9 years; and

WHEREAS, since the advent of limited entry and quota share fisheries, the financial barriers that hinder young Alaskans in establishing viable fishing businesses have mounted and multiplied, with the cost of some limited entry salmon permits at more than $100,000 and the average cost of halibut quota shares rising 195 percent between 1995 and 2009; and

WHEREAS the overall cost of entry into the commercial fisheries on a diversified level sufficient to provide a viable income for a skipper and crew has increased to at least $300,000 for boat, gear, permit, and quota shares; and

WHEREAS escalating costs thwart the ambitions of young fishers, many of whom lack the extensive credit histories and considerable collateral assets needed to secure substantial bank loans; and

WHEREAS a modern commercial fishing operation requires an operator to possess business savvy and a sophisticated understanding of regulatory processes, as well as the ability to engage with federal and state fisheries policy makers; and

WHEREAS barriers faced by young people in the state seeking to acquire ownership of fisheries operations play a significant role in the drain of limited entry permits and fishery quota shares from coastal communities and contribute to increasing ownership of fisheries permits and businesses in the state by nonresidents; and

WHEREAS programs of the commercial fishing revolving loan fund in the Department of Commerce, Community, and Economic Development seek to promote the development of predominantly resident fisheries in the state; and

WHEREAS the office of fisheries development in the Department of Commerce, Community, and Economic Development provides a wide variety of resources designed to spur fisheries-related economic development; and

WHEREAS the Alaska sea grant marine advisory program, which is funded in part by the legislature through the University of Alaska, provides young Alaskans with education and training in fisheries business financial management, seafood direct marketing, state and federal regulatory processes, and effective public speaking before regulatory bodies; and

WHEREAS, to varying degrees, high schools and postsecondary educational institutions in the state offer classes in fisheries skill sets and nautical sciences; and

WHEREAS the University of Alaska Fairbanks offers a bachelor of arts degree in fisheries to provide students with a knowledge base, skills set, and practical experience to be

highly competitive in obtaining rewarding employment in the state's fishing industry, and the University of Alaska Southeast fisheries technology program exposes young people to promising careers in commercial fishing and offers programs in aquaculture and fisheries management; and

WHEREAS the graying of the fleet in the state continues unabated; and

WHEREAS, in June 2011, University of Alaska President Patrick Gamble created the allied fisheries working group as a cross-campus initiative to assess and enhance the development of programs, courses, research, and information that meet the employment needs of the fisheries, seafood, and maritime industries; and

WHEREAS the allied fisheries working group was established to sustain and enhance the economy and the communities in the state by developing education and training that supports a responsive work force and enables the fishing, seafood, and maritime industries to continue to be vibrant and substantial contributors to the state; and

WHEREAS the allied fisheries working group was established to assist Alaskans, particularly young Alaskans, to discover and prepare for the wide range of employment opportunities in the fishing, seafood, and maritime industries; and

WHEREAS, in the latest phase of University of Alaska's initiative, the university has joined the fishing industry, government, and Rasmuson Foundation participants to create the University of Alaska fisheries, seafood, and maritime initiative; and

WHEREAS the goals of the University of Alaska fisheries, seafood, and maritime initiative align closely with the Alaska State Legislature's objective to turn the tide on the graying of the fleet by strengthening programs and providing resources to facilitate the entry of young Alaskans into gainful, lifelong, ownership-level commercial fishing careers;

BE IT RESOLVED that the Alaska State Legislature endorses and encourages the continuing work of the University of Alaska fisheries, seafood, and maritime initiative; and be it

FURTHER RESOLVED that the president of the senate shall appoint one senator and the speaker of the house of representatives shall appoint one representative as liaisons to the University of Alaska fisheries, seafood, and maritime initiative so that the Alaska State Legislature is kept well apprised of the initiative's progress; and be it

FURTHER RESOLVED that the legislators appointed as liaisons to the University

of Alaska fisheries, seafood, and maritime initiative shall provide quarterly reports to the legislature on the initiative's progress; and be it

FURTHER RESOLVED that, by January 20, 2013, the legislators appointed as liaisons to the University of Alaska fisheries, seafood, and maritime initiative shall submit recommendations to the legislature regarding ways in which the legislature may effectively contribute to the initiative.

ALASKA STATE LEGISLATURE

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State Capitol Building,
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Juneau, Alaska 99801-2186
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REPRESENTATIVE STEVE THOMPSON
DISTRICT 10

FAX COVERSHEET

To: Leg. Legal

Fax Number: 465-2450

From: Jane W. Pierson

Date: 2/15/12 Number of pages including cover: 2

Re: HCR18 version 27-LS0838\B

Last night the House Special Committee on Fisheries passed out the above-referenced bill with the accompanying conceptual amendment.

Please go final on the resolution

Thank you

E-Mail: Representative.Steve.Thompson@legis.state.ak.us
Website: www.akrepublicans.org/thompson/

#_____

CONCEPTUAL

AMENDMENT

OFFERED IN THE HOUSE SPECIAL COMMITTEE ON FISHERIES

To: CSHCR18(FSH) Offered by Rep. Thompson

Page 3, Line 1:

After "industry" insert:

", and the University of Alaska Southeast fisheries technology program exposes young people to harvesting careers in commercial fishing and offers programs in aquaculture and fisheries management"

27-LS0838\B
Bailey/Bullard
2/13/12

CS FOR HOUSE CONCURRENT RESOLUTION NO. 18( )

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-SEVENTH LEGISLATURE - SECOND SESSION

BY

Offered:
Referred:

Sponsor(s): HOUSE SPECIAL COMMITTEE ON FISHERIES

A RESOLUTION

Relating to an examination of fisheries-related programs to facilitate the entry of young Alaskans into commercial fisheries careers and to collaboration with the University of Alaska fisheries, seafood, and maritime initiative.

BE IT RESOLVED BY THE LEGISLATURE OF THE STATE OF ALASKA:

WHEREAS the Alaska seafood industry employs more workers than any other private sector industry in the state; and

WHEREAS, to continue to thrive, the Alaska resident seafood industry will need future generations of Alaskans to engage in rewarding, ownership-level careers in the industry; and

WHEREAS the average age of a commercial salmon fishing skipper in the state has risen from approximately 41 years of age in 1980 to older than 49 years of age in recent years; and

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WHEREAS, since the advent of limited entry and quota share fisheries, the financial barriers that hinder young Alaskans in establishing viable fishing businesses have mounted and multiplied, with the cost of some limited entry salmon permits at more than $100,000 and the average cost of halibut quota shares rising 195 percent between 1995 and 2009; and

WHEREAS the overall cost of entry into the commercial fisheries on a diversified level sufficient to provide a viable income for a skipper and crew has increased to at least $300,000 for boat, gear, permit, and quota shares; and

WHEREAS escalating costs thwart the ambitions of young fishers, many of whom lack the extensive credit histories and considerable collateral assets needed to secure substantial bank loans; and

WHEREAS a modern commercial fishing operation requires an operator to possess business savvy and a sophisticated understanding of regulatory processes, as well as the ability to engage with federal and state fisheries policy makers; and

WHEREAS barriers faced by young people in the state seeking to acquire ownership of fisheries operations play a significant role in the drain of limited entry permits and fishery quota shares from coastal communities and contribute to increasing ownership of fisheries permits and businesses in the state by nonresidents; and

WHEREAS programs of the commercial fishing revolving loan fund in the Department of Commerce, Community, and Economic Development seek to promote the development of predominantly resident fisheries in the state; and

WHEREAS the office of fisheries development in the Department of Commerce, Community, and Economic Development provides a wide variety of resources designed to spur fisheries-related economic development; and

WHEREAS the Alaska sea grant marine advisory program, which is funded in part by the legislature through the University of Alaska, provides young Alaskans with education and training in fisheries business financial management, seafood direct marketing, state and federal regulatory processes, and effective public speaking before regulatory bodies; and

WHEREAS, to varying degrees, high schools and postsecondary educational institutions in the state offer classes in fisheries skill sets and nautical sciences; and

WHEREAS the University of Alaska Fairbanks offers a bachelor of arts degree in fisheries to provide students with a knowledge base, skills set, and practical experience to be

highly competitive in obtaining rewarding employment in the state's fishing industry; and

WHEREAS the graying of the fleet in the state continues unabated;

WHEREAS, in June 2011, University of Alaska President Patrick Gamble created the allied fisheries working group as a cross-campus initiative to assess and enhance the development of programs, courses, research, and information that meet the employment needs of the fisheries, seafood, and maritime industries; and

WHEREAS the allied fisheries working group was established to sustain and enhance the economy and the communities in the state by developing education and training that supports a responsive work force and enables the fishing, seafood, and maritime industries to continue to be vibrant and substantial contributors to the state; and

WHEREAS the allied fisheries working group was established to assist Alaskans, particularly young Alaskans, to discover and prepare for the wide range of employment opportunities in the fishing, seafood, and maritime industries; and

WHEREAS, in the latest phase of University of Alaska's initiative, the university has joined the fishing industry, government, and Rasmuson Foundation participants to create the University of Alaska fisheries, seafood, and maritime initiative; and

WHEREAS the goals of the University of Alaska fisheries, seafood, and maritime initiative align closely with the Alaska State Legislature's objective to turn the tide on the graying of the fleet by strengthening programs and providing resources to facilitate the entry of young Alaskans into gainful, lifelong, ownership-level commercial fishing careers;

BE IT RESOLVED that the Alaska State Legislature endorses and encourages the continuing work of the University of Alaska fisheries, seafood, and maritime initiative; and be it

FURTHER RESOLVED that the president of the senate shall appoint one senator and the speaker of the house of representatives shall appoint one representative as liaisons to the University of Alaska fisheries, seafood, and maritime initiative so that the Alaska State Legislature is kept well apprised of the initiative's progress; and be it

FURTHER RESOLVED that the legislators appointed as liaisons to the University of Alaska fisheries, seafood, and maritime initiative shall provide quarterly reports to the legislature on the initiative's progress; and be it

FURTHER RESOLVED that, by January 20, 2013, the legislators appointed as

liaisons to the University of Alaska fisheries, seafood, and maritime initiative shall submit recommendations to the legislature regarding ways in which the legislature may effectively contribute to the initiative.

FISCAL NOTE

STATE OF ALASKA
2012 LEGISLATIVE SESSION

Bill Version: **HCR18 version B**
Fiscal Note Number:
() Publish Date:

Identifier (file name):
Title: COMMERCIAL FISHERIES PROGRAMS
Dept. Affected: LAA
Appropriation: 0
Allocation:
Sponsor: House Special Committee on Fisheries
Requester: House Special Committee on Fisheries
OMB Component Number:

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	FY13 Appropriation Requested	Included in Governor's FY13 Request	Out-Year Cost Estimates				
OPERATING EXPENDITURES	**FY13**	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**
Personal Services							
Travel							
Services							
Commodities							
Capital Outlay							
Grants, Benefits							
Miscellaneous							
TOTAL OPERATING	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

FUND SOURCE		(Thousands of Dollars)						
1002	Federal Receipts							
1003	GF Match							
1004	GF							
1005	GF/Prgm (DGF)							
1037	GF/MH (UGF)							
1178	temp code (UGF)							
TOTAL		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

POSITIONS							
Full-time							
Part-time							
Temporary							

CHANGE IN REVENUES	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Estimated SUPPLEMENTAL (FY12) operating costs 0.0 *(separate supplemental appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Estimated CAPITAL (FY13) costs 0.0 *(separate capital appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Why this fiscal note differs from previous version (if initial version, please note as such)

Prepared by: Jane W. Pierson, Aide
Phone: 465-3004
Division: House Special Committee on Fisheries
Date/Time: 2/14/12 2:43pm
Approved by: Representative Steve Thompson
House Special Committee on Fisheries
Date: 2/14/2012

(Revised 11/18/2011 OMB)

FISCAL NOTE

STATE OF ALASKA
2012 LEGISLATIVE SESSION

BILL NO. HCR18 version B

Analysis

There are no significant fiscal impacts for the Governor's office associated with this bill.

University of Alaska
Fisheries, Seafood, and Maritime Initiative

The University of Alaska Fisheries, Seafood Maritime Initiative will engage with fisheries, seafood, and maritime sectors and community partners to assess, develop and deliver programs, training, and research that prepares Alaskans to meet current and emerging workforce, economic, and scientific needs.

Goals of the University of Alaska's Fisheries, Seafood and Maritime Initiative are:

- **Enhance the economy and the communities of Alaska** by developing a responsive workforce that enables the fishing/seafood and maritime industries to stay vibrant and substantial contributors to the state.

- **Support Alaska's workforce**, particularly in coastal communities, in discovering and preparing for the wide range of employment opportunities in the fishing, seafood and maritime industries.

- **Provide research to sustain resources** on which these communities and sectors depend.

We envision that the University's initiative will:

- **Collaborate** with the industry and communities at all stages of this effort to help the University plan, develop and deliver programs and support students.

- **Align** all levels of training and education from high school through graduate school and among all UA campuses. Each program will have a clear pathway to other programs in a coordinated manner.

- **Develop and deliver** programs and training that are innovative and responsive in their timing, geographic reach and delivery methods to address diverse learning styles and situations defined by industry and community partners.

- **Provide access** by Alaskans to comprehensive training and education programs that will enable them to meet the economic development and workforce needs of these large, broad and varied industries.

- **Deliver applied research** and technical services in support of the fisheries, seafood, and maritime sectors of Alaska.

**developed by the University of Alaska Fisheries, Seafood and Maritime Working Group, January 2012*
for more information go to www.alaska.edu/fsmi or contact Paula Cullenberg at 274-9692 paula.cullenberg@alaska.edu or Greta Goto at 786-1171 greta.goto@alaska.edu

UNIVERSITY of ALASKA







UNIVERSITY of ALASKA
Many Traditions One Alaska

Summary Inventory of University of Alaska Educational and Training Offerings related to Fisheries, Seafood, and Maritime Industries December 2011

The University of Alaska (UA) Allied Fisheries Working Group* has completed a report that inventories the University's educational and training capacity related to fisheries, seafood, and maritime industries. The report, *"Allied Fisheries: University of Alaska Partnership with the Fisheries, Seafood and Maritime Industries,"* is available online at: http://seagrant.uaf.edu/map/initiatives/marinescience/workforceplan/docs/alliedfishreport.pdf . This document presents a summary of the above report's inventory, showing programs by campus and relationship to Fisheries, Seafood, and Maritime industries.

- **50 credit producing programs are considered to be directly relevant** to the fishing, seafood or maritime industry stakeholders (pp 2-5); 90 more are considered to have some relevancy to the fishing, seafood, and maritime industries, or are offered in coastal areas of the state and may easily be adapted or expanded, or have potential through broadening curriculum or geographic reach (see pp 6-11). Approximately 200 courses are offered by the University system, which relate specifically to fisheries, seafood and maritime education and training.
    - **9 Occupational Endorsements programs**: Commercial Refrigeration; Diesel Heavy Duty; Diesel Marine Mechanics; Diesel USCG Marine Oiler; Logistics; Marine Engine Room Prep; Marine Engine Room Repair; Marine Transportation; Welding
    - **7 Certificate programs**: Career Training for Ports and Marinas; Fishery Technology; Industrial Technology-Oil Spill Response; Port and Coastal Engineering; Refrigeration and Heat Technology; Welding & Non-Destructive Testing Tech; Welding Tech
    - **10 Associates programs**: Diesel Technology at UAA, UAS; Fishery Technology; Industrial Technology – Oil Spill Response; Occupational Safety and Health; Power Technology; Refrigeration and Heat Technology; Welding; Welding and Non-destructive Testing at UAA, UAF
    - **2 Minors**: Fisheries and Marine Science
    - **4 Bachelors of Arts programs**: Biology at UAA, UAF and UAS; Fisheries
    - **2 Bachelors Business Administration programs**: Global Logistics Supply Chain Management; Logistics
    - **5 Bachelors of Science programs**: Biology at UAA, UAF and UAS; Fisheries; Marine Biology
    - **6 Masters of Science programs**: Biology at UAA, UAF; Fisheries; Global Logistics; Marine Biology; Oceanography
    - **5 PhD programs**: Biology at UAF, UAA; Fisheries; Marine Biology; Oceanography
- **30 to 40 non-credit workshops or short courses** are offered each year on an as-needed, statewide basis by the UAF Marine Advisory Program and other University campuses on topics like fishing technology, seafood product quality and safety, marketing and energy efficiency, and Fishery Observer Training. (see pp 12-13)
- About 30% of the fisheries, seafood and maritime related courses found in the inventory are offered via **e-learning**.
- The University engages **Advisory Councils to inform and guide education and training programs.**
- The University has **specialized capacities** such as the Fisheries Industrial Technology Center and **K-12 outreach** programs like the UAS Ketchikan Marine Transportation MOA with Ketchikan Gateway Borough School District for use of a 45 foot training vessel; UAF Bristol Bay Campus partnership with Bristol Bay Economic Development Corporation for a Salmon Camp.

*Allied Fisheries Working Group:
Paula Cullenberg, Chair; UAF, Alaska Sea Grant Marine Advisory Program
Bear Baker, UAA, College of Business and Public Policy
Barbara Bolson, UAA Kodiak College
Mike Castellini, UAF School of Fisheries and Ocean Sciences
Keith Criddle, UAF SFOS Fisheries Division
Rick Caulfield, UAS Provost
Quentin Fong, UAF SFOS Kodiak Center (FITC)
Mark Herrmann, UAF School of Management
Duane Heyman, UA Statewide Corporate Programs
Bernice Joseph, UAF Vice Chancellor, Rural Community & Native Education
Gunnar Knapp, UAA Institute of Social and Economic Research
Deborah McLean, UAF Bristol Bay Campus
Bonnie Nygard, UAA Workforce Development and Career Pathway Planning
Mary Pete, UAF Kuskokwim Campus
Karen Schmitt, UAA Community and Technical College
Jim Seeland, UAS Fisheries Technology Program
Kate Sullivan, UAS Fisheries Technology Program
Fred Villa, UA Statewide Workforce Development
BJ Williams, PWSCC Training Coordinator

Credit Producing Programs Directly relevant to the Fisheries, Seafood, and Maritime Industries

University of Alaska Anchorage

Anchorage Main Campus

UA Fisheries/Seafood/Maritime Education and Training Programs - 2011									
Program Name	**F[1]**	**S[1]**	**M[1]**	**UA Certification or Degree Code**	**MAU**	**Campus**	**Location Offered**	**Annual Enrollment (FY11)[3]**	**Number of certifications/ degrees awarded (avg over 6 yrs)[4]**
Diesel Technology	Y	Y	Y	AAS	UAA	Anchorage	Anchorage	N/A	1
Welding & Nondestructive Testing Technology	Y	Y	Y	AAS	UAA	Anchorage	Anchorage	121	4
Global Logistics Supply Chain Management		Y	Y	BBA	UAA	Anchorage	Anchorage	66	1
Global Logistics Supply Chain Management		Y	Y	MS	UAA	Anchorage	Anchorage	1	6
Logistics		Y	Y	BBA	UAA	Anchorage	Anchorage	N/A	1
Logistics		Y	Y	OEC	UAA	Anchorage/ Mat-Su	Anchorage/Mat-Su	0	2
Biology	Y			BA	UAA	Anchorage	Anchorage/Homer/ Soldotna (Distance)	155	7
Biology	Y			BS	UAA	Anchorage	Anchorage/Homer/ Soldotna (Distance)	575	25
Biology	Y			MS	UAA	Anchorage	Anchorage	31	4
Biology	Y			PhD	UAA	Anchorage	Anchorage	9	N/A
Port and Coastal Engineering			Y	GCRT	UAA	Anchorage	Anchorage	N/A	N/A

Notes: 1- F[1], S[1], M[1] - Occupational Categories (Fisheries/Seafood/Maritime) noted by working group members; 3 - Annual Enrollment (FY11) - numbers provided by Institutional Research; 4 - Number of Certifications/Degrees awarded - average of certifications/degrees awarded from 2006 - 2011. Data provided by Institutional Research.

Kenai Peninsula College

UA Fisheries/Seafood/Maritime Education and Training Programs - 2011									
Program Name	**F[1]**	**S[1]**	**M[1]**	**UA Certification or Degree Code**	**MAU**	**Campus**	**Location Offered**	**Annual Enrollment (FY11)[3]**	**Number of certifications/degrees awarded (avg over 6 yrs)[4]**
Welding Technology	Y	Y	Y	CT2	UAA	KPC/ K-Bay	Soldotna/Homer	25	1

Notes: 1- F[1], S[1], M[1] - Occupational Categories (Fisheries/Seafood/Maritime) noted by working group members; 3 - Annual Enrollment (FY11) - numbers provided by Institutional Research; 4 - Number of Certifications/Degrees awarded - average of certifications/degrees awarded from 2006 - 2011. Data provided by Institutional Research.

Kodiak Campus

UA Fisheries/Seafood/Maritime Education and Training Programs - 2011									
Program Name	**F[1]**	**S[1]**	**M[1]**	**UA Certification or Degree Code**	**MAU**	**Campus**	**Location Offered**	**Annual Enrollment (FY11)[3]**	**Number of certifications/degrees awarded (avg over 6 yrs)[4]**
Welding	Y	Y	Y	AAST	UAA	Kodiak	Kodiak	0	0
Welding	Y	Y	Y	CT1	UAA	Kodiak	Kodiak	9	1
Occupational Safety and Health		Y	Y	AAS	UAA	Kenai/ Kodiak	Kenai/ Kodiak	150	N/A

Notes: 1- F[1], S[1], M[1] - Occupational Categories (Fisheries/Seafood/Maritime) noted by working group members; 3 - Annual Enrollment (FY11) - numbers provided by Institutional Research; 4 - Number of Certifications/Degrees awarded - average of certifications/degrees awarded from 2006 - 2011. Data provided by Institutional Research.

Matanuska-Susitna College

UA Fisheries/Seafood/Maritime Education and Training Programs - 2011									
Program Name	**F[1]**	**S[1]**	**M[1]**	**UA Certification or Degree Code**	**MAU**	**Campus**	**Location Offered**	**Annual Enrollment (FY11)[3]**	**Number of certifications/degrees awarded (avg over 6 yrs)[4]**
Commercial Refrigeration	Y	Y	Y	OEC	UAA	MatSu	Palmer	N/A	N/A
Refrigeration and Heat Technology	Y	Y	Y	AAS	UAA	MatSu	Mat-Su	37	3
Refrigeration and Heat Technology	Y	Y	Y	CT2	UAA	MatSu	Mat-Su	10	3

Notes: 1- F[1], S[1], M[1] - Occupational Categories (Fisheries/Seafood/Maritime) noted by working group members; 3 - Annual Enrollment (FY11) - numbers provided by Institutional Research; 4 - Number of Certifications/Degrees awarded - average of certifications/degrees awarded from 2006 - 2011. Data provided by Institutional Research.

Prince William Sound Community College

UA Fisheries/Seafood/Maritime Education and Training Programs - 2011									
Program Name	**F[1]**	**S[1]**	**M[1]**	**UA Certification or Degree Code**	**MAU**	**Campus**	**Location Offered**	**Annual Enrollment (FY11)[3]**	**Number of certifications/degrees awarded (avg over 6 yrs)[4]**
Industrial Technology - Oil Spill Response			Y	AAS	UAA	PWSCC	Valdez	24	N/A
Industrial Technology - Oil Spill Response			Y	CT1	UAA	PWSCC	Valdez	3	N/A

Notes: 1- F[1], S[1], M[1] - Occupational Categories (Fisheries/Seafood/Maritime) noted by working group members; 3 - Annual Enrollment (FY11) - numbers provided by Institutional Research; 4 - Number of Certifications/Degrees awarded - average of certifications/degrees awarded from 2006 - 2011. Data provided by Institutional Research.

University of Alaska Fairbanks
Fairbanks Main Campus

UA Fisheries/Seafood/Maritime Education and Training Programs - 2011									
Program Name	**F[1]**	**S[1]**	**M[1]**	**UA Certification or Degree Code**	**MAU**	**Campus**	**Location Offered**	**Annual Enrollment (FY11)[3]**	**Number of certifications/degrees awarded (avg over 6 yrs)[4]**
Welding & Nondestructive Testing Technology	Y	Y	Y	AAS	UAF	Fairbanks	Fairbanks	3	4
Fisheries	Y	Y		BA	UAF	Fairbanks	Kodiak, Juneau, Fairbanks	25	TBD
Fisheries	Y	Y		Minor	UAF	Fairbanks	Kodiak, Juneau, Fairbanks	8	N/A
Fisheries	Y	Y		MS with science, marine policy, seafood science	UAF	Fairbanks	Fairbanks, Juneau	71	9
Fisheries	Y	Y		PhD with science, marine policy, seafood science	UAF	Fairbanks	Fairbanks, Juneau, Anchorage	38	2
Oceanography	Y		Y	MS	UAF	Fairbanks	Fairbanks	8	1
Oceanography	Y		Y	PhD	UAF	Fairbanks	Fairbanks	13	2
Biology	Y			BA	UAF	Fairbanks	Fairbanks	169	7
Biology	Y			BS	UAF	Fairbanks	Fairbanks	584	34
Biology	Y			MS	UAF	Fairbanks	Fairbanks	58	8
Biology	Y			PhD	UAF	Fairbanks	Fairbanks	71	8
Fisheries	Y			BS	UAF	Fairbanks	Kodiak, Juneau, Fairbanks	104	8
Marine Biology	Y	-	-	MS	UAF	Fairbanks	Fairbanks	21	5
Marine Biology	Y	-	-	PhD	UAF	Fairbanks	Fairbanks	24	1
Marine Science	Y	-	-	Minor	UAF	Fairbanks	Fairbanks	N/A	N/A

Notes: 1- F[1], S[1], M[1] - Occupational Categories (Fisheries/Seafood/Maritime) noted by working group members; 3 - Annual Enrollment (FY11) - numbers provided by Institutional Research; 4 - Number of Certifications/Degrees awarded - average of certifications/degrees awarded from 2006 - 2011. Data provided by Institutional Research.

University of Alaska Southeast

Juneau Campus

UA Fisheries/Seafood/Maritime Education and Training Programs - 2011									
Program Name	**F[1]**	**S[1]**	**M[1]**	**UA Certification or Degree Code**	**MAU**	**Campus**	**Location Offered**	**Annual Enrollment (FY11)3**	**Number of certifications/ degrees awarded (avg over 6 yrs)4**
Diesel Heavy Duty	Y	Y	Y	OEC	UAS	Juneau	Juneau	4	2
Diesel Marine Mechanics	Y	Y	Y	OEC	UAS	Juneau	Juneau	1	1
Diesel Technology	Y	Y	Y	AAS	UAS	Juneau	Juneau	N/A	N/A
Power Technology		Y	Y	AAS	UAS	Juneau	Juneau	46	1
Biology	Y			BA	UAS	Juneau	Juneau	16	7
Biology	Y			BS	UAS	Juneau	Juneau	40	7
Marine Biology	Y			BS	UAS	Juneau	Juneau	24	5
Diesel USCG Marine Oiler			Y	OEC	UAS	Juneau	Juneau	N/A	1
Fishery Technology	Y			AAS	UAS	Fish Tech Faculty Ketchikan, PWSCC, and BB Soon	statewide/+ onsite lab (Anchorage, PSWCC, Fairbanks, Rural College, Interior Aleutians, Juneau, Ketchikan, Sitka)	38	2

Notes: 1- F[1], S[1], M[1] - Occupational Categories (Fisheries/Seafood/Maritime) noted by working group members; 3 - Annual Enrollment (FY11) - numbers provided by Institutional Research; 4 - Number of Certifications/Degrees awarded - average of certifications/degrees awarded from 2006 - 2011. Data provided by Institutional Research.

Ketchikan Campus

UA Fisheries/Seafood/Maritime Education and Training Programs - 2011									
Program Name	**F[1]**	**S[1]**	**M[1]**	**UA Certification Degree Code**	**MAU**	**Campus**	**Location Offered**	**Annual Enrollment (FY11)[3]**	**Number of certifications /degrees awarded (avg over 6 yrs)[4]**
Marine Engine Room Preparation	Y	Y	Y	OEC	UAS	Ketchikan	Ketchikan	3	1
Marine Engine Room Repair	Y	Y	Y	OEC	UAS	Ketchikan	Ketchikan	3	1
Welding	Y	Y	Y	OEC	UAS	Ketchikan/ Sitka	Ketchikan, Sitka	7	2
Fishery Technology	Y			CT2	UAS	Ketchikan, PWSCC, and BB Soon	Statewide	0	1
Marine Transportation			Y	OEC	UAS	Ketchikan	Juneau, Ketchikan & others	N/A	N/A

Notes: 1- F[1], S[1], M[1] - Occupational Categories (Fisheries/Seafood/Maritime) noted by working group members; 3 - Annual Enrollment (FY11) - numbers provided by Institutional Research; 4 - Number of Certifications/Degrees awarded - average of certifications/degrees awarded from 2006 - 2011. Data provided by Institutional Research.

Sitka Campus

UA Fisheries/Seafood/Maritime Education and Training Programs - 2011									
Program Name	**F[1]**	**S[1]**	**M[1]**	**UA Certification or Degree Code**	**MAU**	**Campus**	**Location Offered**	**Annual Enrollment (FY11)[3]**	**Number of certifications/ degrees awarded (avg over 6 yrs)[4]**
Career Training for Ports and Marinas			Y	COA	UAS	Sitka	Statewide Online	N/A	N/A

Notes: 1- F[1], S[1], M[1] - Occupational Categories (Fisheries/Seafood/Maritime) noted by working group members; 3 - Annual Enrollment (FY11) - numbers provided by Institutional Research; 4 - Number of Certifications/Degrees awarded - average of certifications/degrees awarded from 2006 - 2011. Data provided by Institutional Research.

Credit Producing Programs interacting with Fisheries, Seafood, and Maritime industries or offered in coastal areas, and easily adapted or expanded

University of Alaska Anchorage

Anchorage Main Campus, Kenai Peninsula College, Kodiak Campus, Matanuska-Susitna College, Prince William Sound Community College

UA Fisheries/Seafood/Maritime Education and Training Programs - 2011									
Program Name	**F[1]**	**S[1]**	**M[1]**	**UA Certification or Degree Code**	**MAU**	**Campus**	**Location Offered**	**Annual Enrollment (FY11)[3]**	**Number of certifications/degrees awarded (avg over 6 yrs)[4]**
Accounting	Y	Y	Y	BBA	UAA	Anchorage	Anchorage	547	47
Marketing	Y	Y	Y	BBA	UAA	Anchorage	Anchorage	N/A	N/A
General Management	Y	Y	Y	MBA	UAA	Anchorage, Juneau	Anchorage, Juneau	195	26
Accounting	Y	Y	Y	AAS	UAA	Anchorage, Kodiak, Mat-Su, KPC,PSWCC	Anchorage, Kodiak, Mat-Su, Kenai, Valdez,	312	27
Small Business Management	Y	Y	Y	CT1	UAA	Kenai	Kenai	1	3
Computer Information and Office Systems	Y	Y	Y	CT1	UAA	Kodiak College	Kodiak	3	2
Applied Accounting	Y	Y	Y	AAS	UAA	Mat-Su/Valdez	MatSu, Valdez	1	0
Computer Information and Office Systems	Y	Y	Y	OEC	UAA	PWSCC	Valdez	1	N/A
Computer Information and Office Systems	Y	Y	Y	AAS	UAA	UAA, KPC, Kodiak, Mat-Su, PSWCC	Anchorage, Kenai, Kodiak, Mat-Su, Valdez	90	12
Applied Business	Y	Y	Y	AAS	UAA	UAA, KPC, PWSCC	Anchorage, Kenai, Valdez	2	N/A
General Business	Y	Y	Y	AAS	UAA	UAF-CTC, Bristol Bay, Rural College	Fairbanks, Bristol Bay, Rural Colleges	14	5
General Business	Y	Y	Y	AAS	UAA		Anchorage, Kenai, Kodiak, Mat-Su, Valdez	187	25
Environment Regulation and Permitting		Y	Y	GCRT	UAA	Anchorage	Anchorage	N/A	1
Hospitality & Restaurant Management		Y	Y	BA	UAA	Anchorage	Anchorage	96	2
Mechanical and Electrical Engineering		Y	Y	BS	UAA	Anchorage	Anchorage	4	N/A
Project Management		Y	Y	MS	UAA	Anchorage	Anchorage	103	17

Mechanical Technology		Y	Y	CT2	UAA	Kenai	Kenai	8	1
Industrial Safety Program Support		Y	Y	CT1	UAA	Kodiak	Kodiak/Anchorage	3	N/A
Industrial Technology-Safety Management		Y	Y	AAS	UAA	PWSCC	Valdez	21	2
Industrial Technology-Safety Management		Y	Y	CT1	UAA	PWSCC	Valdez	0	N/A
Economics	Y			BA/BBA	UAA	Anchorage	Anchorage	54	10
Natural Sciences	Y			BS	UAA	Anchorage	Anchorage	225	23
Supply Chain Management		Y		GCRT	UAA	Anchorage	Anchorage	N/A	1
Process Technology		Y		AAS	UAA	Anchorage, KPC,PWSCC, Mat-Su	Anchorage, Kenai, Kodiak, Valdez, Mat-Su	368	36
Computer Network Technician			Y	AAST	UAA	Anchorage	Anchorage	N/A	1
Environmental Quality Science			Y	MS	UAA	Anchorage	Anchorage	2	2
GIS			Y	CT1	UAA	Anchorage	Anchorage	13	4
Environmental Science			Y	BS	UAA	Anchorage, PWSCC	Anchorage, Valdez	3	3

Notes: 1- F[1], S[1], M[1] - Occupational Categories (Fisheries/Seafood/Maritime) noted by working group members; 3 - Annual Enrollment (FY11) - numbers provided by Institutional Research; 4 - Number of Certifications/Degrees awarded - average of certifications/degrees awarded from 2006 - 2011. Data provided by Institutional Research.

University of Alaska Fairbanks

Fairbanks Main Campus, Bristol Bay Campus, Chukchi Campus, Community and Technical College, Interior Aleutians Campus, Kuskokwim Campus, Northwest Campus

UA Fisheries/Seafood/Maritime Education and Training Programs - 2011									
Program Name	**F[1]**	**S[1]**	**M[1]**	**UA Certification or Degree Code**	**MAU**	**Campus**	**Location Offered**	**Annual Enrollment (FY11)[3]**	**Number of certifications/ degrees awarded (avg over 6 yrs)[4]**
Applied Business	Y	Y	Y	AAS	UAF	Bristol Bay, UAF, UAF-CTC, Interior Aleutians, Kuskokwim, Northwest, Rural Colleges	Bristol Bay, Fairbanks, Nome, Dutch Harbor, Bethel	354	20
Accounting	Y	Y	Y	BBA	UAF	Fairbanks	Fairbanks	307	17
Accounting	Y	Y	Y	AAS	UAF	Fairbanks, UAF-CTC, Bristol Bay	Fairbanks, Bristol Bay	5	N/A
Entry Level Welder	Y	Y	Y	OEC	UAF	Tanana Valley	Tanana Valley	26	2
Rural Development	Y	Y	Y	BA	UAF	UAF, Bristol Bay, Chukchi Campus, Interior Aleutians, Kuskokwim, Northwest, KPC, Anchorage, PSWCC	Fairbanks, Bristol Bay, Chukchi Campus, Interior Aleutians, Bethel, Nome, Anchorage, Kenai, Valdez	208	8
Rural Development	Y	Y	Y	MA	UAF	UAF, Bristol Bay, Chukchi Campus, Interior Aleutians, Kuskokwim, Northwest, KPC, Anchorage, PSWCC		51	8
Applied Business Management	Y	Y	Y	CT2	UAF	UAF-CTC, Chukchi, Interior Aleutians, Tanana Valley	Fairbanks, Dillingham, Nome, Interior Aleutians	60	8
Accounting Technician	Y	Y	Y	CT2	UAF	UAF-CTC, Tanana Valley, Bristol Bay, Northwest	Fairbanks, Bristol Bay, Nome, Tanana Valley	38	8
Applied Accounting	Y	Y	Y	AAS	UAF	UAF-CTC, UAF, Interior Aleutians, Chukchi, Kuskokwim, Northwest	Fairbanks, Bristol Bay, Interior Aleutians, Kotzebue, Bethel, Nome	140	10
Diesel Heavy Equip		Y	Y	CT2	UAF	Fairbanks	Fairbanks	27	5
Mechanical Engineering		Y	Y	BS	UAF	Fairbanks	Fairbanks	242	17
Mechanical Engineering		Y	Y	MS	UAF	Fairbanks	Fairbanks	12	5

Power Generation		Y	Y	CT2	UAF	Fairbanks	Fairbanks	5	3
Power Plant		Y	Y	CT2	UAF	Fairbanks	Fairbanks	2	1
Safety, Health Environmental Awareness Technology		Y	Y	CT2	UAF	UAF-CTC	Fairbanks, Anchorage	25	6
Natural Resources and Sustainability	Y			PhD	UAF	Anchorage	Anchorage	13	1
Economics	Y			BA/BBA	UAF	Fairbanks	Fairbanks	12	4
Natural Resources Management and Geography	Y			MS	UAF	Fairbanks	Fairbanks	8	N/A
Resource and Applied Economics	Y			MS	UAF	Fairbanks	Fairbanks, Anchorage	25	4
Wildlife Biology & Conservation	Y			BS	UAF	Fairbanks	Fairbanks	140	1
Wildlife Biology & Conservation	Y			MS	UAF	Fairbanks	Fairbanks	11	1
Wildlife Biology & Conservation	Y			PhD	UAF	Fairbanks	Fairbanks	0	N/A
Natural Resource Management	Y			BS	UAF	Fairbanks, UAF-CTC, Kuskokwim, Rural College	Fairbanks, Bethel, Rural College, UAF-CTC	128	11
Natural Resource Management	Y			MS	UAF	Fairbanks, UAF-CTC, Kuskokwim, Rural College	Fairbanks, Bethel, Rural College, UAF-CTC	42	5
Renewable Resources	Y			AAS	UAF	Rural Campuses	Rural Campuses (Fairbanks, Bristol Bay, Chukchi, Interior-Aleutians, Kuskokwim, Northwest)	20	1
Process Technology		Y		AAS	UAF	Fairbanks, UAF-CTC, Kuskokwim, Rural College, Interior Aleutians, Northwest Campus	Fairbanks, Bethel, Nome, Bristol Bay, Rural College, Interior Aleutians, CTC, Kotzebue	247	24
Environmental Studies			Y	AA	UAF	Bristol Bay Campus	Dillingham	N/A	N/A
Environmental Science			Y	BS	UAF	Nome, Rural Colleges	Nome, Rural College	4	5

Notes: 1- F[1], S[1], M[1] - Occupational Categories (Fisheries/Seafood/Maritime) noted by working group members; 3 - Annual Enrollment (FY11) - numbers provided by Institutional Research; 4 - Number of Certifications/Degrees awarded - average of certifications/degrees awarded from 2006 - 2011. Data provided by Institutional Research.

University of Alaska Southeast

Juneau Campus, Ketchikan Campus, Sitka Campus

UA Fisheries/Seafood/Maritime Education and Training Programs - 2011									
Program Name	**F[1]**	**S[1]**	**M[1]**	**UA Certification or Degree Code**	**MAU**	**Campus**	**Location Offered**	**Annual Enrollment (FY11)[3]**	**Number of certifications/ degrees awarded (avg over 6 yrs)[4]**
Accounting	Y	Y	Y	BBA	UAS	Juneau	Juneau	51	N/A
Accounting	Y	Y	Y	OEC	UAS	Juneau	Juneau	8	2
Economics	Y	Y	Y	BA	UAS	Juneau	Juneau, Ketchikan, Sitka	2	N/A
Marketing	Y	Y	Y	BBA	UAS	Juneau	Juneau	N/A	N/A
Accounting	Y	Y	Y	AAS	UAS	Juneau, Ketchikan, Sitka	Juneau, Ketchikan, Sitka	9	N/A
Computer Information and Office Systems	Y	Y	Y	AAS	UAS	Juneau, Ketchikan, Sitka	Juneau, Ketchikan, Sitka	50	4
General Business	Y	Y	Y	AAS	UAS	Juneau, Ketchikan, Sitka	Juneau, Ketchikan, Sitka	12	2
Small Business Management	Y	Y	Y	CT1	UAS	Juneau/ Ketchikan/Sitka	Juneau, Ketchikan, Sitka (statewide-distance)	12	1
Accounting Technician	Y	Y	Y	CT2	UAS	Juneau/Ketchikan	Juneau, Ketchikan	50	3
Computer Information and Office Systems	Y	Y	Y	CT1	UAS	Juneau/Ketchikan/ Sitka	Juneau/Ketchikan /Sitka	34	
Entrepreneurship		Y	Y	BBA	UAS	Juneau	Juneau	N/A	N/A
Process Technology		Y		AAS	UAS	Juneau, Ketchikan, Sitka	Juneau, Ketchikan, Sitka	7	1
Environmental Science			Y	BS	UAS	Juneau	Juneau	43	4
Geography and Environmental Studies			Y	BA	UAS	Juneau	Juneau	14	1

Notes: 1- F[1], S[1], M[1] - Occupational Categories (Fisheries/Seafood/Maritime) noted by working group members; 3 - Annual Enrollment (FY11) - numbers provided by Institutional Research; 4 - Number of Certifications/Degrees awarded - average of certifications/degrees awarded from 2006 - 2011. Data provided by Institutional Research.

Credit Producing Programs with potential to interact with the Fisheries, Seafood, and Maritime industries through broadening curriculum or geographic reach

UA Fisheries/Seafood/Maritime Education and Training Programs - 2011							
Program Name	**F[1]**	**S[1]**	**M[1]**	**UA Certification or Degree Code**	**MAU**	**Campus**	**Location Offered**
Environmental Quality Engineering			Y	MS	UAA	Anchorage	Anchorage
Industrial Process Instrumentation			Y	AAS	UAA	Anchorage	Kenai
Nutrition		Y		BS	UAA	Anchorage	Anchorage
Technology			Y	BS/BT	UAA	Anchorage	Anchorage
Office Digital Media		Y	Y	OEC	UAA	Anchorage, KPC, Kodiak, Mat-Su	Anchorage, Kenai, Kodiak, Mat-Su
Office Support		Y	Y	OEC	UAA	Kenai, Kodiak, Anchorage, Mat-Su	Kenai, Kodiak, UAA, MatSu
Office Technology		Y	Y	CT2	UAA	Kenai, Kodiak, Anchorage, Mat-Su	Kenai, Kodiak, UAA, MatSu
Heating		Y	Y	CT2	UAA	MatSu	Mat-Su
Mechanical and Electrical Drafting			Y	CT1	UAA	MatSu	Anchorage/Mat-Su
Small Business Administration				AAS	UAA	MatSu	Anchorage, Mat-Su
Millwright			Y	AAS	UAA	PWSCC	Valdez
Office Management and Technology		Y	Y	CT2	UAA	PWSCC	
Environmental Chemistry		Y	Y	MS	UAF	Fairbanks	Fairbanks
Environmental Engineer			Y	BS	UAF	Fairbanks	Fairbanks
Technology			Y	BS/BT	UAF	Fairbanks	Fairbanks
Human Resources		Y	Y	BAA	UAS	Juneau	Juneau
Network Support Technician		Y	Y	OEC	UAS	Juneau, Ketchikan/Sitka	Juneau, Ketchikan, Sitka, Distance
Network Tech		Y	Y	OEC	UAS	Juneau, Ketchikan/Sitka	Juneau, Ketchikan, Sitka, distance
Web Development	-	-	-	OEC	UAS	Juneau, Ketchikan/Sitka	Juneau
Law Enforcement	Y			OEC	UAS	Sitka	Sitka

Notes: 1- F[1], S[1], M[1] - Occupational Categories (Fisheries/Seafood/Maritime) noted by working group members; 3 - Annual Enrollment (FY11) - numbers provided by Institutional Research; 4 - Number of Certifications/Degrees awarded - average of certifications/degrees awarded from 2006 - 2011. Data provided by Institutional Research.

Examples of Non-credit Courses Related to Fisheries, Seafood, and Maritime Offered through UA

Non-credit Course Title	Mau/Program	Locations offered/Participants from
Alaska Seafood Processing Leadership Institute	UAF Marine Advisory	Kodiak and Anchorage/Statewide
Alaska Young Fishermen's Summit	UAF Marine Advisory	Anchorage/statewide
Alaskan Shellfish Farming - Technology and Business Training	UAF Marine Advisory	Ketchikan
Alyeska SERVS oil spill fishing vessel response marine HAZWOPer courses	UAF Marine Advisory	Kodiak
Better Process Control School	UAF Marine Advisory	Anchorage
Board of Fisheries Training Workshop	UAF Marine Advisory	Dillingham, Koliganek
Boating without the Boys	UAF Marine Advisory	Petersburg, Cordova
Business of Fish - Fuel savings, risk management, taxes, regulations, direct marking, basics of bookkeeping	UAF Marine Advisory	Dillingham
Business Plan Development	UAF Marine Advisory	Quinhagak, Bethel
Business Planning for Commercial Fishermen	UAF Marine Advisory	Anchorage/ Togiak, Manokotak, New Stuyahok
Business Planning for Shrimp Fishermen	UAF Marine Advisory	Petersburg, Juneau, Wrangell, Ketchikan
Career Training for Ports and Marinas	UAS/Sitka	Statewide Online
Direct Marketing	UAF Marine Advisory	Togiak, Naknek, Anchorage, Dillingham
Field Biology Course	UAF Marine Advisory	Nome/Nome, St. Michael, Savoonga
Financial Mgt for Fishermen	UAF Marine Advisory	Statewide
Fishbiz Workshop - Financial Management	UAF Marine Advisory	Haines, Bethel, Craig
Fishery Observer Training	UAA Community Technical College	Anchorage
HACCP	UAF Marine Advisory	Nome, Unalakleet, Savoonga, Dillingham, Anchorage, Kodiak
HACCP II	UAF Marine Advisory	Anchorage, Kodiak/Statewide
Harmful Algal Blooms	UAF Marine Advisory	Cordova
Hazardous materials training	PWSCC	Valdez
Hazwopper	MAPTS, PWSCC, Kodiak College	Kenai, Valdez, Kodiak
Icing and Handling for Quality	UAF Marine Advisory	Dillingham, Naknek, Cordova
Intro to Direct Marketing	UAF Marine Advisory	Anchorage
Introduction to Financial Management	UAF Marine Advisory	Kodiak
Marine Hydraulics	UAS/Sitka	Statewide Online
Marine Mammal Identification and Bycatch	UAF Marine Advisory	Anchorage
Marine Refrigeration	UAF Marine Advisory	Ketchikan, Anchorage, Sitka, Petersburg, Kodiak
Marine Safety Drill Instructor	UAF Marine Advisory	Cordova
NEPA Training	UAF Marine Advisory	Dillingham, Koliganek, Naknek
Net Mending	UAF Marine Advisory	Cordova
Observer Training Class - marine mammal ID	UAF Marine Advisory	Anchorage

Phytoplankton monitoring workshop	UAS Fishery Technology Program	Ketchikan/statewide
Quality handling for fishermen	UAF Marine Advisory	Statewide
Quickbooks Training	UAF Marine Advisory	Bethel, Quinhagak, Eek, Goodnews Bay
Salmon Quality Handling Workshop	UAF Marine Advisory	Petersburg
Sanitation	UAF Marine Advisory	Dillingham, Anchorage
Sea Otters in SE Alaska Workshop	UAF Marine Advisory	Ketchikan, Petersburg, Wrangell, Sitka
Seafood Processor Training	UAF Marine Advisory	Naknek
Seafood Quality	UAF Marine Advisory	Togiak
Shellfish and HABs	UAF Marine Advisory	Anchorage
Strategies for Buying/Selling Fishing Business	UAF Marine Advisory	Petersburg
Surviving Cold Water Emergencies	UAF Marine Advisory	Koyuk, Shaktoolik, Shishmaref
Village Based Entrepreneurship Class	UAF Marine Advisory	New Stuyahok, Koliganek

UNIVERSITY of ALASKA
Many Traditions One Alaska

ALLIED FISHERIES: University of Alaska Partnership with the Fisheries, Seafood and Maritime Industries

October 2011

Executive Summary

In June 2011, University of Alaska President Patrick Gamble appointed an 18-member University of Alaska Allied Fisheries Working Group, a cross-campus group of deans, directors and faculty members.

Allied Fisheries is a cross-campus University of Alaska collaborative initiative to assess and enhance the development and delivery of programs, courses, research and information that meet the employment needs of the fisheries, seafood and maritime industries.

The goals of the University of Alaska's Allied Fisheries initiative are:

- *To sustain and enhance the economy and the communities of Alaska by developing education and training that supports a responsive workforce enabling the fishing, seafood and maritime industries to stay vibrant and substantial contributors to the state.*
- *To support Alaskans, particularly young Alaskans, in discovering and preparing for the wide range of employment opportunities in the fishing, seafood and maritime industries.*

One of the first charges to the group was to "identify and inventory existing UA institutional capacity for training and education that supports all aspects of the fishing business industries, fisheries support and fisheries development in Alaska." The Allied Fisheries Working Group has broadened the inventory to include also the institutional capacity for training and education in support of the seafood and maritime industries. This inventory provides a starting point for the University of Alaska to begin working with industry and community leaders to improve the educational and training opportunities for fisheries, seafood and maritime careers.

Inventory Conclusions

- Collectively, the fisheries, seafood and maritime programs offered within the UA system meet many of the education and training needs of prospective employees in these industries. However, they lack coordination, planning, and a cohesive identity. Outside of fisheries biology and management, fisheries, seafood or maritime specific courses may be difficult to locate or identify, are generally not organized into career tracks, and in most cases are not comprehensive in content coverage. Without question there are major gaps in the UA system's content offerings needed to meet workforce training demands in these industries. But equally important is the need to elevate these industries to an educational priority that will recognize the needs and opportunities and will provide career education and training tracks to prospective students.

- The UA advisory committees identified in this inventory each address part but not all of the educational and training needs of the fishing, seafood and maritime industries and coastal communities that depend on them.
- Fisheries - Almost the entire faculty capacity in programs focusing on fisheries consists of the Fisheries division faculty members (UAF SFOS), Marine Advisory Program faculty members (UAF SFOS) and two UAS faculty in the Fisheries Technology program. Although some faculty members in other parts of the system are engaged in fisheries education, training and research, it is generally as individuals rather than within a directed program. Formal training in fisheries is primarily focused on biology and management related occupations. Business and technical skills are offered primarily as non-credit, informal classes.
- Seafood - Five seafood faculty members at the UAF SFOS Kodiak Center provide some targeted seafood industry training and public service but in general there is no comprehensive training program to serve the seafood industry other than at the seafood science graduate student level in the UA system.
- Maritime - The University of Alaska Southeast provides training for maritime industries and has growth potential. Other than these programs, the UA system has few courses or programs addressing the employment and training needs of the maritime industries.
- Business and marketing training specific to the fisheries, seafood and maritime industries currently is not directly addressed in the UA system other than through informal education and short courses.
- Depending on industry and community identified needs, there may be room to revamp and enhance existing programs; collaborate with non-UA education and training providers; or create new programs. A number of programs are potentially easily adaptable or have the potential to grow—including Rural Development, Fisheries Technology and Marine Transportation and Technology. Some type of formal training program for commercial fishermen should be considered.

Next Steps

Moving forward, the Allied Fisheries Working Group recommends these steps and work products.

- Establish an advisory committee that provides input to the University from the fisheries, seafood, maritime industries and communities.
- Conduct an occupations inventory and workforce assessment.
- Complete an education and training gap analysis and establish priorities.
- Identify unique constraints and opportunities for effective education and training delivery for these occupations.
- Develop an integrated and comprehensive action plan.

For more information: www.marineadvisory.org/initiatives/marinescience/workforceplan/



Industry Workforce Educational Needs Assessment

Report of the Seafood-Fisheries Summit

Rasmuson Foundation Office, Anchorage

16 December, 2011



UNIVERSITY
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Executive Summary

The December 16, 2011 Seafood Summit meeting convened by the Governor of Alaska, the Chair of the Rasmuson Foundation and the President of the University of Alaska marked an historic step in workforce development for the Alaskan seafood industry and related maritime sectors. The Summit provided an unprecedented opportunity for industry to inform the University, Government of Alaska and the Rasmuson Foundation about their workforce development challenges and needs. It was clear that current education and training systems do not adequately support industry requirements and that it is timely to reassess how those needs can best be met to sustain one of Alaska's leading industries.

Those concerns were embraced in the proposed action steps outlined by University President Gamble. Over the next year, the University shall:

- oversee an inventory of fisheries and maritime occupations
- complete an education and training gap analysis and establish priorities
- identify constraints and opportunities for education and training delivery
- develop an integrated and comprehensive action plan

Industry, Government and Foundation participants in the Summit endorsed this approach and have committed to work with President Gamble to to promote a more structured and aligned approach to workforce development.

Industry leaders agreed to identify senior staff to work with the University and committed to providing further information, as needed, to assist the work of the University.

The Rasmuson Foundation will continue to work directly with the University, the State of Alaska, with industry and with fishing communities to support the development of a capable and well trained workforce.

The Governor of Alaska offered assistance, through the Departments of Labor and Workforce Development and Fish and Game, with needs assessment and integration of statewide industry training programs; the Labor and Workforce Development Commissioner offered the resources of his department to support this work.

Overview

In October, 2011, Alaska Governor Sean Parnell, Ed Rasmuson, Chair of the Rasmuson Foundation Board, and Patrick Gamble, President of the University of Alaska, invited leading seafood industry executives to convene with senior government and university officials at the Rasmuson Foundation office in Anchorage to initiate a dialogue on workforce development. The Seafood-Fisheries Summit represented an historic gathering of industry, government and academc leaders and was the culmination of a significant investment in the fisheries sector by the Foundation and the University.

The Summit was intended to assist in the development of comprehensive educational opportunities for a responsive workforce that enables the fishing and seafood industries in Alaska to remain vibrant. Alaska's seafood industry workforce development requirements and University-based education programs are not yet in sync.

The major outcome envisaged from the Summit was to secure the commitment of major seafood employers to engage in a detailed industry workforce/education needs assessment.

Summit Preparations

In 2008, the Rasmuson Foundation initiated a five year, $5 million partnership with the University of Alaska Fairbanks, School of Fisheries and Ocean Sciences, to invigorate undergraduate fisheries education progams within the UA system. The initiative has been overseen by a Fisheries Excellence Committee comprised of representatives of the University, government, industry and the Rasmuson Foundation.

During the process of evaluating industry structure and directions, the Committee recognized that there are a diverse range of needs for education and workforce development, some of which overlap with the undergraduate fisheries initiative, but many that extend well beyond the current initiative. The Committee recommended a reassessment of strategic directions for workforce development to the University, to the Foundation and to industry and government partners.

In the lead up to the Summit, in June, 2011, University President Patrick Gamble appointed an 18 member Allied Fisheries Working Group. Allied Fisheries is a cross-campus University of Alaska collaborative initiative to assess and enhance the development and delivery of programs, courses, research and information that meet the employment needs of the fisheries, seafood and maritime industries.

The goals of the University of Alaska's Allied Fisheries initiative are:

• *To sustain and enhance the economy and the communities of Alaska by developing education and training that supports a responsive workforce enabling the fishing, seafood and maritime industries to stay vibrant and substantial contributors to the state.*

• *To support Alaskans, particularly young Alaskans, in discovering and preparing for the wide range of employment opportunities in the fishing, seafood and maritime industries.*

One of the first charges to the group by President Gamble was to *"identify and inventory existing UA institutional capacity for training and education that supports all aspects of the fishing business industries, fisheries support and fisheries development in Alaska."*

The Allied Fisheries Working Group broadened the inventory to include also the institutional capacity for training and education in support of the seafood and maritime industries. A copy of the inventory was distributed at the Summit and is available online at http://seagrant.uaf.edu/map/initiatives/marinescience/workforceplan/docs/alliedfishsum.pdf.

Summit Participation

The Summit was attended by nine top employer executives in the Alaska seafood and fisheries sectors, as well as the Governor of Alaska and commissioners from the Alaska State Department of Fish & Game and Labor & Workforce Development, and the President and two Chancellors from the University of Alaska (UAF and UAS). Participants are listed in Appendix A and represent a broad cross section of industry interests from both different regions of Alaska and different industry sectors.

Opening Discussion

During his welcoming remarks, Ed Rasmuson emphasized the importance of the seafood industry and maritime sector generally to Alaska. He noted that Alaska's fisheries industries are the State's largest private employer, providing more than 70,000 jobs in 2009. He observed that Alaska's fisheries cover a vast geographic area and demand a diverse range of skills – from technical to managerial, and that current training and education programs do not adequately address these needs – hence the need for this Summit and a greater engagement with industry. He noted that he and his father Elmer had a long history of engagement with Alaska's fisheries, including service on the North Pacific Fisheries Management Council. He reiterated that the Foundation wishes to continue to support a strong and sustainable fisheries sector.

Governor Parnell noted the local, national and increasingly global significance of Alaska's fisheries. During a recent visit to Europe he saw how valued our fisheries products are and heard how other nations view our fisheries management as a more sustainable approach. He noted that, in order to continue to reap the many benefits of this industry, there has to be excellent integration between communities, industry, government and academic interests. That integration can be achieved through better alignment of all training and workforce development activities.

UA President Patrick Gamble outlined the comprehensive approach being taken within the University of Alaska system to seafood industry education. Describing recent efforts to inventory UA program offerings related to seafood and fisheries/maritime sectors, he noted that many staff within the UA system were surprised by just how many programs UA already has in place. He emphasized his vision of Fisheries/Maritime programs having a "halo effect[1]" for the University overall. Using both the University's existing expertise in fisheries and ocean sciences, and building on its more fundamental education programs, the University of Alaska could become the global center for coldwater fisheries education.

Key Issues

a. UA Working More Effectively with Industry

Participants noted the importance of understanding how industry works and what its needs are when designing and developing training programs. They noted that while the University's array of training programs has "moved in the right direction" in recent years, and there is an emerging model of successful partnership in Bristol Bay, there have been some fundamental concerns about the University's operations. These included:

- high overhead rates
- advocacy against the industry at hearings
- lack of portability of University credits within the UA system
- lack of responsiveness to industry needs.

President Gamble assured participants that the University is determined to overcome these perception issues – this initiative is a manifestation of the University's desire to be more engaged and responsive to industry needs.

b. It's All About the Fish

[1] Halo Effect refers to the ability of a strategy (or leader) to synergize/motivate and market all related programs in a more positive light.

The sustainability of fisheries production in Alaska is fundamental to the future of the industry and therefore the future of the workforce. Various observations were made about factors that determine sustainability – from sound scientific management of stocks to the ability to reduce waste and better utilize resources. Participants appreciated the University's extensive research capacity and noted how many companies have made significant contributions to building that research over many years. However, they also noted that sustainability depends on a greater emphasis on understanding the businesses and communities that depend on fisheries and making a greater effort to understand their needs. This can range from promoting a more positive image of the fishing industry (promoting greater pride in fisheries as a career) to more fundamental changes in the harvesting and processing of fish to improve efficiency.

c. Youth Employment and Engagement

Participants agreed that one of the key challenges facing most coastal and rural communities is the lack of employment opportunities, particularly for youth. *"The best intervention is to put a kid to work"* was a widely endorsed sentiment. However, there was also considerable discussion about barriers to achieving greater youth employment. These included:

- Lack of youth understanding of opportunities in the seafood industry – it was frequently noted that engagement with youth on workforce opportunities is both limited and begins too late. There was strong support to market fishing and maritime careers more actively to teens and even pre-teens. Participants observed that activities such as the current UA National Ocean Sciences Bowl program held annually in Seward was a good way to promote greater youth engagement
- Seasonal limitations of fisheries
- Perception of fishing industry jobs as being low status and requiring mobility
- Drug and substance abuse among minors – it was observed that in some rural communities, it can be easier to buy drugs than milk. One particularly disturbing observation was that a minor consuming charge is permanent under Alaskan law and therefore limits subsequent lifelong employment in the fishing industry, while a murder citation could be expunged from an offender's record!

d. Beyond the Slime Line

One often cited issue faced by the fishing industry which acts as a major impediment to workforce recruitment is the lack of understanding of the industry. Many potential entrants to the workforce do not understand (a) the range of jobs available in the industry and/or (b) the potential for career progression beyond fish processing ("the slime line").

Industry representatives noted that part of this (mis)perception of opportunities derives from the lack of understanding about the stability and predictability of the industry. While catch volumes may vary from year-to-year, long-established operators provide a buffer to that volatility over time and offer increasingly diversified opportunities for career development. There is a dearth of readily-accessible information about the wider career opportunities available in the fisheries and related industries.

e. Beyond Biologists

Industry and government representatives noted that one of the biggest misconceptions in workforce development was the apparent over emphasis on scientific training. While many UA graduates have gone on to successful careers within government, research and academic organizations, these are not where the majority of workforce development needs exist. Participants proposed that greater attention be given to:

- Manufacturing sector jobs – it was observed that fisheries is one of Alaska's few true manufacturing sectors and that we have only just begun to explore the full range of value-added opportunities. More analysis would likely generate even greater opportunities for allied disciplines such as engineering, architecture, accounting, graphic design, marketing, etc.
- Maritime sector jobs – it was observed that there is much overlap in core skills between various sub-sectors of the seafood-fishing industries. Greater reengagement with the maritime sector would be beneficial in ensuring that industry can access skilled staff and in enabling greater mobility within the industry. Participants noted that this might be achieved through closer integration with AVTEC and the Statewide Career and Technical Education Plan (Dept. Labor)
- Aquaculture skills – while aquaculture forms a relatively small part of the overall sector and employment market currently, there are emerging needs for greater aquaculture skills. Employers noted that the introduction of skills from recent employees who are graduates of aquaculture programs in Chile, Canada and Norway has been beneficial in improving business efficiency
- Career pathways – updating our understanding of current and emerging career pathways and providing a more aligned training structure would be very helpful – we currently have an inadequate map of career options to guide prospective entrants and to communicate about the value of a fisheries/maritime career.

f. Telling our Story Better

Underpinning much of the discusison was a recogntion that neither the industry, nor the University has given enough attention to sharing the Alaska fisheries story. While there were some good examples cited of how changes in the fishing industry have made a big difference to coastal communities (e.g. introduction of CDQs) there is a strong sense that more needs to be done. Suggestions ranged from more frequent industry-Universiity interaction to development of career promotion materials to better marketing of safe seafood production and how it underpins the Alaska seafood brand.

Next Steps

The Summit provided an unprecedented opportunity for industry to inform the University, Government of Alaska and the Rasmuson Foundation about their workforce development challenges and needs. It was clear that current education and training systems do not adequately support industry requirements and that it is timely to reassess how those needs can best be met to sustain one of Alaska's leading industries.

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The Governor of Alaska offered assistance, through the Departments of Labor and Workforce Development and Fish and Game, with needs assessment and integration of statewide industry training programs; the Labor and Workforce Development Commissioner offered the full resources of his department to support this work.

Appendix: Summit Participants

Hosts:

The Honorable Sean Parnell, Governor, State of Alaska

Mr. Patrick Gamble, President, University of Alaska

Mr. Edward Rasmuson, Chairman, Rasmuson Foundation

Participants:

Mr. Ragnar Alstrom, Executive Director, Yukon Delta Fisheries Development Association

Mr. Joe Bundrant, Chair, Trident Seafoods Corp.

The Honorable Click Bishop, Commissioner, Alaska Department of Labor & Workforce Development

The Honorable Cora Campbell, Commissioner, Alaska Department of Fish & Game

Mr. Barry Collier, President & CEO, Peter Pan Seafoods, Inc.

Mr. Larry Cotter, CEO, Aleutian Pribilof Island Community Development Association

Mr. Morgen Crow, Executive Director, Coastal Villages Region Fund

Mr. Dennis Guhlke, CEO, Icicle Seafoods, Inc.

Ms. Diane Kaplan, President & CEO, Rasmuson Foundation

Mr. Mark Palmer, President & CEO, Ocean Beauty Seafoods LLC

Mr. John Pugh, Chancellor, University of Alaska Southeast

Mr. Brian Rogers, Chancellor, University of Alaska Fairbanks

Mr. Robin Samuelsen, President & CEO, Bristol Bay Economic Development Corporation

Mr. Terry Shaff, President and CEO, UniSea, Inc.

Observers:

Mr. Ian Dutton, Vice President, Rasmuson Foundation

Mr. Jeffrey Jones, Special Staff Assistant, Office of the Governor

Ms. Beth Leschper, Communications Director, Dept. Labor & Workforce Development

Mr. Jordan Marshall, Initiatives & Special Projects Manager, Rasmuson Foundation

Mr. Trevor McCabe, Chief Operating Officer, Coastal Villages Region Fund

Mr. Mark Myers, Vice Chancellor for Research Services, University of Alaska

Mr. Frederick Villa, Associate Vice President, Workforce Programs, University of Alaska

Invitees Unable to Attend:

Mr. Inge Andreassen, President American Seafoods

Ms. Janice Ivanoff, President & CEO Norton Sound Economic Development Corporation

Mr. Phillip Lestenkof, President Central Bering Sea Fishermen's Association

Mr. Jeff Trandahl, Executive Director National Fish and Wildlife Foundation

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EXECUTIVE SUMMARY

CHANGES IN THE DISTRIBUTION OF ALASKA'S COMMERCIAL FISHERIES ENTRY PERMITS, 1975 to 2010

CFEC Report Number 11-3N-EXEC

Alaska Commercial Fisheries Entry Commission
8800 Glacier Highway, Suite 109
P.O. Box 110302
Juneau, Alaska 99811-0302
(907) 789-6160

Abstract

This report provides detailed information on changes in the distribution of permanent entry permits in Alaska's limited fisheries. From 1975 through 2010, 79 permit types have been issued in 65 fisheries. The report provides both state-wide and fishery-specific data on the number of permit transfers, the geographic distribution of permit holders, changes due to permit transfers, changes due to the relocation of permit holders and the year-end 2010 geographic distribution of permit holders.

The report also includes extensive information on the age of permit holders, age differences between transferors and transfer recipients, the incidence of intra-family and business partner transfers, transfer acquisition methods, and financing of permit purchases. The information contained in the report is derived from the Commercial Fisheries Entry Commission's permit and transfer survey files.

The report is published as two separate documents: an executive summary and the principal report, which is primarily a reference document.

List of Preparers

Marcus Gho
Kurt Iverson
Craig Farrington

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Introduction

In 1972, voters amended Alaska's constitution to allow limited entry into the state's commercial fisheries. Following this amendment, in 1973 the State Legislature enacted Alaska's Limited Entry Act (AS 16.43), creating the state's limited entry program and giving the Commercial Fisheries Entry Commission (CFEC) the responsibility for administering the program.

Limited entry was implemented in 19 of the state's salmon fisheries in 1974. By the end of 2010, entry permits had been issued in a total of 65 commercial fisheries: 26 salmon fisheries, 19 herring fisheries, 9 crab fisheries, 5 sablefish fisheries, 3 shrimp fisheries, and 3 dive fisheries. In some limited fisheries, more than one type of permit was issued to help contain increases in fishing power. Some permits constrain the amount of gear that can be used, while others constrain the length of the vessel. To date, a total of 79 permit types have been issued in the 65 limited fisheries.[1]

A legal prerequisite of the Limited Entry Act was that permits could not be locked in the hands of those who were originally issued them (i.e., the "initial issuees"). After much study and debate, the legislature chose free transferability as the means to allow permit holders to enter and exit the fisheries.

Free transferability allows the transfer of permits from parents to their children and allows family members to inherit a permit upon the death of a permit holder. It allows fishermen to enter and exit fisheries at times opportune to them, and it eliminates the need for an expensive and time-consuming bureaucratic process to handle permit reallocation. Many other transfer options were considered but were found lacking with respect to these criteria.

In 1983, the Alaska State Supreme Court decided *State of Alaska v. Ostrosky*, which challenged the constitutionality of the Limited Entry Act, particularly the free transferability provisions. The court upheld the constitutionality of both the Act and of free transferability, and also affirmed the legislative objectives in adopting the transferability option. The decision was subsequently allowed to stand by the United States Supreme Court when it dismissed the Ostrosky appeal in *Ostrosky v. State*.

Despite the benefits of free transferability, many people remain concerned that permit transfers might result in undesirable consequences with regard to the distribution of permits. There is a concern that permits will leave the state, or that permits will disappear from isolated fishing communities which are local to a limited fishery, thereby eroding the economic base. Because of these concerns about free transferability, CFEC has produced this updated report so that the legislature, the administration, and other interested parties will be kept accurately apprised of the facts.

This edition of *Changes in the Distribution of Alaska's Commercial Fisheries Entry Permits* has been published as two separate documents. The executive summary provides tables that address the most common questions about limited entry permits. It includes information on permit holdings, and how holdings are affected by permit transfers and by the migration (relocation) of permit holders. There is also summary information from the results of permit transfer surveys. The principal report is primarily a reference document and includes more detailed fishery-specific and time series tables on the topics addressed in the executive summary. The main report also contains sections on rural permit holders, and on permit holders who live locally to the fisheries where they hold permits.

Both the executive summary and the principal report cover all the limited fisheries and permit types for which permanent permits have been issued from 1975 through 2010. Information from Census 2000 is used to determine rural and urban classifications.

Transfer Incidence

CFEC issues both transferable and nontransferable permits in the state's limited fisheries; therefore, not all permits are available for transfer. The Limited Entry Act requires CFEC to initially allocate permits using hardship ranking systems, often called "point systems," which rank individuals based upon the relative hardship they would suffer if they were denied a permit. The Act also requires CFEC to determine levels within the point systems where persons would experience only minor economic hardship if excluded from the fishery. Persons who receive permanent permits and who are ranked at or below the minor economic hardship level receive nontransferable permits. From 1975 through 2010, 16,532 permanent limited entry permits were issued in 65 fisheries: 14,175 permits were fully transferable,[2] and 2,357 were non-transferable.

Some permits for a fishery may be initially issued several years after the main body of permits has been issued. This is because some applicants are difficult to classify under a hardship ranking system, and a final determination of their standing may come only after an extensive hearing and adjudication process. In other cases, permits have been issued at a later date as the result of lawsuits brought against CFEC.

Permit Transfers

During the 1975-2010 time period there were 36,305 permanent permit transfers. At the end of 2010, there were 13,595 transferable permits, and original permit holders had transferred 11,729 permits, indicating that approximately 82.7% of all transferable permits had changed hands at least once. Over the entire period, the average annual number of transfers per number of transferable permits was 8.4% (36,305 total transfers / 430,289 sum of all annual transferable permits).

Transfer Rates

Two types of annual transfer rates are shown in Table 1. The first is the ratio of permits transferred for the first time to the total number of transferable permits. Permits transferred for the first time are those that are held by initial issuees. Over time, this ratio would decline if no new permits were issued because each year there would be fewer permits held by initial issuees. As expected, the ratio declined, from 0.08 to 0.01, over the 1975-2010 period. Over the same period, the average annual ratio of transfers from initial issuees to transferable permit years is 0.03.

The second type of annual transfer rate is the ratio of all transfers to available transferable permits, which provides a measure of the annual turnover rate for transferable permits. This ratio varied between 0.06 and 0.13 from 1975 through 2010, and averaged 0.08 for all years combined.[3] As can be seen in Table 1, the ratio dropped to near the all-years average in 1989 and remained at or below the average until 2010.

Table 1. Statewide Transfer Data on Permanent Permits by Year

Year	Permit Types	Number of Permanent Permits *	Number of Transferable Permits **	Annual Number of Transfers From Initial Issuees	Ratio of Transfers From Initial Issuees to Transferable Permits	Total Annual Number of Transfers ***	Ratio of Transfers to Transferable Permits
1975	19	6,762	6,762	568	0.08	590	0.09
1976	25	9,173	9,160	650	0.07	776	0.08
1977	28	9,772	9,710	780	0.08	1,108	0.11
1978	29	9,975	9,895	777	0.08	1,314	0.13
1979	29	10,104	10,016	557	0.06	1,209	0.12
1980	29	10,132	10,040	522	0.05	1,060	0.11
1981	29	10,204	10,112	505	0.05	1,092	0.11
1982	31	11,030	10,936	553	0.05	1,144	0.10
1983	31	12,488	10,965	566	0.05	1,211	0.11
1984	33	12,531	11,009	414	0.04	1,053	0.10
1985	33	12,509	11,173	387	0.03	1,111	0.10
1986	33	12,517	11,226	402	0.04	1,191	0.11
1987	34	12,492	11,253	305	0.03	1,120	0.10
1988	37	12,584	11,409	345	0.03	1,125	0.10
1989	42	12,655	11,495	276	0.02	914	0.08
1990	48	13,027	11,911	270	0.02	950	0.08
1991	48	13,066	12,000	260	0.02	929	0.08
1992	50	13,419	12,366	206	0.02	952	0.08
1993	50	13,423	12,429	216	0.02	854	0.07
1994	50	13,404	12,460	217	0.02	908	0.07
1995	50	13,357	12,461	232	0.02	1,010	0.08
1996	50	13,347	12,492	228	0.02	941	0.08
1997	58	13,639	12,798	262	0.02	961	0.08
1998	65	14,075	13,171	186	0.01	860	0.07
1999	67	14,291	13,321	172	0.01	814	0.06
2000	70	14,336	13,400	179	0.01	964	0.07
2001	72	14,802	13,708	256	0.02	958	0.07
2002	76	14,801	13,730	163	0.01	793	0.06
2003	76	14,654	13,660	183	0.01	942	0.07
2004	78	14,488	13,569	149	0.01	984	0.07
2005	78	14,536	13,653	178	0.01	1,142	0.08
2006	78	14,534	13,640	163	0.01	1,025	0.08
2007	78	14,472	13,611	165	0.01	1,082	0.08
2008	78	14,389	13,573	173	0.01	1,083	0.08
2009	78	14,412	13,580	98	0.01	962	0.07
2010	78	14,415	13,595	166	0.01	1,173	0.09
Total	*78*		*430,289*	*11,729*	*0.03*	*36,305*	*0.08*

* 2,311 permits have been cancelled. Except for the 194 reinstated cancelled permits, cancelled permits are excluded from the year of cancellation forward.

** 708 transferable permits have been cancelled, and 128 transferable permits have been added through conversion from nontransferable to transferable status through the CFEC adjudication process.

*** The number of transfers includes 342 loan foreclosures by the Department of Commerce, Community and Economic Development or by the Commercial Fishing and Agriculture Bank, and 334 subsequent transfers from these entities.

Geographic Distribution of Permits: Changes Due to Transfers, Migrations, and Cancellations

Classification of Permits and Permit Holders

This report measures changes in permit distribution by classifying permit holders based upon where they reside. Five resident type classifications are defined. Permit holders who reside in Alaska are classified into "rural" or "urban" and "local" or "nonlocal" groups. Nonresidents are classified into a single category. The resident types and their acronyms are listed below:

ARL: ***Alaska*** resident of a ***Rural*** community which is ***Local*** to the fishery for which the permit applies;

ARN: ***Alaska*** resident of a ***Rural*** community which is ***Nonlocal*** to the fishery for which the permit applies;

AUL: ***Alaska*** resident of an ***Urban*** community which is ***Local*** to the fishery for which the permit applies; [4]

AUN: ***Alaska*** resident of an ***Urban*** community which is ***Nonlocal*** to the fishery for which the permit applies;

NR: ***Nonresident*** of Alaska.

DCCED / CFAB: Signifies permits that have been foreclosed upon by the Alaska Department of Commerce, Community and Economic Development (DCCED), or by the Commercial Fishing and Agriculture Bank (CFAB), and have yet to be transferred.

An example of how this classification works could be a permit holder who lives in Dillingham and holds two limited entry permits. If one permit is for the Bristol Bay drift gillnet fishery, it will be classified as a permit held by an Alaska Rural Local because Dillingham is a rural community and is local to Bristol Bay. If the other permit is for the Cook Inlet herring seine fishery, then that permit will be classified as one held by an Alaska Rural Nonlocal because Dillingham is rural, but not local to Cook Inlet.

Urban and rural designations are based upon information from Census 2000. Because editions of this report prior to 2003 used 1990 census criteria, some changes have occurred in the rural/urban designations. In general, there are now more Alaska places designated as rural, and consequently more permits issued to persons classified as rural residents.

Changes in the Distribution of Permits

Table 2 provides summary information on the initial issuance and changes in permit holdings for the assigned resident types. Between 1975 and the end of 2010, 16,532 permanent permits were issued in Alaska's limited fisheries. Alaska residents received 81.6% of the total (13,487 permits), and nonresidents received 18.4% (3,045 permits). Almost half of all permits issued (46.0%) went to Alaska Rural Locals, with 26.0% issued to Alaska Urban Locals. The remaining permits issued to Alaskans were divided between the Alaska Rural and Urban Nonlocal resident types.

The number of permits held by each resident type can change for three reasons: permits can be transferred to other resident types; permit holders can simply move from one locale to another (migration); or permits may be cancelled.

TABLE 2. Initial Issuance, Total Net Changes, and Year-end 2010 Permanent Limited Entry Permits by Resident Type

Residency	Total Initially Issued	Pct Issued	Transfer Change	Transfer Pct	Migration Change	Migration Pct	Cancelled Change	Cancelled Pct	Total Change	Total Pct	Total 2010 Year-end	Pct Year-end
Alaska Rural Local	7,603	46.0%	-558	-7.3%	-925	-12.2%	-720	-9.5%	-2,203	-29.0%	5,400	37.5%
Alaska Rural Nonlocal	693	4.2%	289	41.7%	-2	-0.3%	-86	-12.4%	201	29.0%	894	6.2%
Alaska Urban Local	4,306	26.0%	300	7.0%	-322	-7.5%	-770	-17.9%	-792	-18.4%	3,514	24.4%
Alaska Urban Nonlocal	885	5.4%	161	18.2%	353	39.9%	-147	-16.6%	367	41.5%	1,252	8.7%
Nonresident	3,045	18.4%	-200	-6.6%	896	29.4%	-394	-12.9%	302	9.9%	3,347	23.2%
DCCED / CFAB	0	0.0%	8	-	0	-	0	-	8	-	8	0.1%
Total	**16,532**	**100%**	**0**		**0**		**-2,117**		**-2,117**		**14,415**	**100%**

By the end of 2010, the total number of permits had decreased to 14,415 due to the cancellation of 1,723 Alaskan permits and 394 nonresident permits. Note that at year-end 2010, 8 permits had been foreclosed upon by DCCED or CFAB and had yet to be transferred.

Cancellation normally occurs on nontransferable permits when a permit holder dies or does not renew the permit. In this report, the number of cancelled permits also includes permits that were administratively removed or reconsidered through CFEC's adjudication process. Most of the cancelled permits were in the Salmon Hand Troll fishery (1,116, or 55.7% of the total; see Table 5) where a large number of nontransferable entry permits were issued.

When the effects of cancellation, transfers, and migration were combined at the end of 2010, Alaska residents held 11,068 permits (76.8% of the total, including eight permits held by DCCED or CFAB). Nonresidents held 3,347 permits (23.2%).

Decreases in the number of permits held by Alaska residents are countered by increases in the number of nonresident permits. Migrations, which refer to the relocation of permit holders, have changed the resident/nonresident balance to a greater degree than permit transfers. By the end of 2010, the net result of permit transfer activity had decreased the number of permits held by nonresidents by 200 permits, whereas permit holders moving into and out of Alaska resulted in a net increase of 896 non-resident permits.

Tables 3 and 4 show permit distribution at initial issuance and at the end of 2010, for the 65 fisheries and 79 permit types where limited entry permits have been issued. Table 5 shows the net effects of transfer, migration, and cancellation for the same fisheries. Table 6 also shows the results of transfers, migrations, and cancellations, but does so over all fisheries annually for the 5 resident types.

Some of the more noteworthy changes are:

The overall decline of 2,203 permits held by Alaska Rural Locals represents 29.0% of all transferable and nontransferable permits originally issued to them. Although migration accounted for the majority of this decrease (925 permits), Alaska Rural Locals also lost permits through transfer activity (558 permits) and cancellations (720 permits).

Of the decline in permits due to transfers involving Alaska Rural Locals, 74.6% of the decrease occurred in the Bristol Bay Drift (261 permits) and Set Gillnet (155 permits) fisheries.

As mentioned, permit holders moving into and out of Alaska brought about a net increase of 896 nonresident permits. Net increases in nonresident permits due to migration occurred in 54 separate permit types, especially in the hand troll fishery (115 permits) and the salmon fisheries in

Bristol Bay (197), Kodiak (110), and Cook Inlet (106).

Also mentioned previously is the transfer activity that resulted in an overall net decline of 200 permits held by nonresidents. Through transfers, nonresidents increased their permit holdings in 19 permit types, but registered net decreases in 40 permit types. Some fisheries in particular show large increases in Nonresident-held permits through transfers, most notably the Bristol Bay salmon fisheries (242), the Salmon Hand Troll fishery (42) and the Cook Inlet Setnet fishery (26).

Conversely though, in other fisheries the net result of transfers led to large decreases of permits held by nonresidents. For example, the Salmon Power Troll fishery (-139), the Kodiak Salmon Seine fishery (-81), the Cook Inlet Salmon Drift Gillnet fishery (-66), and the Prince William Sound Salmon Drift Gillnet fishery (-61) all show substantial declines.

Alaska Urban Locals show a total net decrease of 792 permits from initial issuance through 2010. Cancellation of permits accounted for the majority of the decline. Most of the cancelled permits occurred in the Salmon Hand Troll fishery and were cancelled due either to the death of a nontransferable permit holder, or to the forfeiture of the permit for non-payment of permit renewal fees. Combining with the drop in permits due to cancellation, Alaska Urban Local permit holders also show a net decrease of 322 permits through migration, but a net gain of 300 permits by transfer.

Both transfers and migrations have contributed to an increase in permits held by Alaska Urban Nonlocals. Over the 1975-2010 period, there was a cumulative net gain of 367 permits held by this resident group, which represents a 41.5% increase in the number of permits originally issued to them. Transfer and migration activity in the Bristol Bay salmon fisheries accounted for 171 of the total net gain in permits. Altogether, Alaska Urban Nonlocals show net increases due to transfer in 22 permit types, and net increases due to migration in 38 permit types.

Alaska Rural Nonlocals are the smallest resident group. They recorded an overall net gain of 201 permits, especially through migration in the Arctic/Yukon/Kuskokwim salmon fisheries, and through transfers mainly in the Prince William Sound salmon fisheries, the Peninsula/Aleutians drift gillnet fishery, and the Norton Sound herring gillnet fishery.

TABLE 3. Total Number of Initial Permit Holders by Permit Type and Resident Type

Permits First Issued in:	All Permits Issued to					All Transferable Permits Issued to					All Permits	
	AK Rural Local	Alaska Rural Nonlocal	Alaska Urban Local	Alaska Urban Nonlocal	Non-resident	AK Rural Local	Alaska Rural Nonlocal	Alaska Urban Local	Alaska Urban Nonlocal	Non-resident	Alaska Total	Grand Total
1975												
SE Salmon Seine	106	0	106	0	207	106	0	106	0	207	212	419
SE Salmon Drift Gillnet	118	1	195	4	157	118	1	195	4	157	318	475
Salmon Power Troll	264	5	406	11	286	264	5	406	11	286	686	972
Yakutat Salmon Setnet	129	3	0	22	18	129	3	0	22	18	154	172
PWS Salmon Seine	186	12	0	14	55	186	12	0	14	55	212	267
PWS Salmon Drift Gillnet	350	20	0	28	139	350	20	0	28	139	398	537
PWS Salmon Setnet	21	0	0	2	7	20	0	0	2	7	23	30
Cook Inlet Salmon Seine	76	0	7	1	1	76	0	7	1	1	84	85
Cook Inlet Salmon Drift	167	11	197	11	187	167	11	197	11	187	386	573
Cook Inlet Salmon Setnet	202	16	446	26	56	202	16	446	26	56	690	746
Kodiak Salmon Seine	76	25	162	10	111	76	25	162	10	111	273	384
Kodiak Salmon Beach Seine	13	2	18	1	2	12	1	17	1	1	34	36
Kodiak Salmon Setnet	44	3	77	13	51	44	3	77	13	51	137	188
Chignik Salmon Seine	29	12	0	29	21	29	12	0	29	21	70	91
Pen/Aleutian Salmon Seine	101	0	2	3	15	101	0	2	3	15	106	121
Pen/Aleutian Salmon Drift	98	1	1	13	49	98	1	1	13	49	113	162
Pen/Aleutian Salmon Setnet	99	0	0	9	8	99	0	0	9	8	108	116
Bristol Bay Salmon Drift	713	184	0	232	746	713	184	0	232	746	1,129	1,875
Bristol Bay Salmon Setnet	661	64	0	161	155	557	49	0	140	137	886	1,041
	3,453	*359*	*1,617*	*590*	*2,271*	*3,347*	*343*	*1,616*	*569*	*2,252*	*6,019*	*8,290*
1976												
Upper Yukon Salmon Gillnet	56	3	13	2	1	56	3	13	2	1	74	75
U Yukon Salmon Fish Wheel	141	2	18	2	2	141	2	18	2	2	163	165
Kuskokwim Salmon Gillnet	665	2	172	0	0	665	2	172	0	0	839	839
Kotzebue Salmon Gillnet	54	3	157	5	1	54	3	157	5	1	219	220
Lower Yukon Salmon Gillnet	680	19	0	12	1	680	19	0	12	1	711	712
Norton Sound Salmon Gillnet	178	1	23	2	0	178	1	23	2	0	204	204
	1,774	*30*	*383*	*23*	*5*	*1,774*	*30*	*383*	*23*	*5*	*2,210*	*2,215*
1977-78												
SE Roe Herring Seine	4	0	37	0	6	4	0	37	0	6	41	47
SE Herring Gillnet	18	0	65	1	27	18	0	65	1	27	84	111
PWS Roe Herring Seine	32	42	0	20	11	32	42	0	20	11	94	105
Cook Inlet Herring Seine	46	3	4	14	8	46	3	4	14	8	67	75
	100	*45*	*106*	*35*	*52*	*100*	*45*	*106*	*35*	*52*	*286*	*338*
1980-87												
Salmon Hand Troll	792	10	1,155	48	156	324	1	332	11	37	2,005	2,161
NSEI Sablefish Longline	8	2	37	2	22	8	2	37	2	22	49	71
SSEI Sablefish Longline	0	0	10	0	3	0	0	10	0	3	10	13
SSEI Sablefish Pots	1	0	1	0	1	1	0	1	0	0	2	3
SE Red,Blue King Crab Pot	1	0	3	0	2	1	0	3	0	2	4	6
SE Rd,Blue,Brn Kng Crb Pot	0	0	5	0	2	0	0	4	0	1	5	7
SE Brown King Crab Pot	0	0	8	0	1	0	0	3	0	1	8	9
SE Rd,Blue King/Tanner Pot	1	0	12	0	1	1	0	12	0	1	13	14
SE Brown King/Tanner Pot	1	0	2	0	3	1	0	1	0	2	3	6
SE All King/Tanner Pot	5	0	22	0	2	5	0	20	0	2	27	29
SE Tanner Crab Pot	2	1	13	0	9	2	1	12	0	5	16	25
PWS Roe Herring Gillnet	20	0	0	0	4	20	0	0	0	4	20	24
PWS Her Spawn on K Pound	67	8	0	17	36	67	8	0	17	36	92	128
Kodiak Roe Herring Seine	11	10	44	2	14	9	5	36	1	6	67	81
Kodiak Roe Herring Gillnet	5	29	53	19	13	5	21	38	12	6	106	119
Kodiak Roe Her Seine/Gill	0	0	1	0	1	0	0	1	0	0	1	2
	914	*60*	*1,366*	*88*	*270*	*444*	*38*	*510*	*43*	*128*	*2,428*	*2,698*
1988-91												
BBay Herring Spawn on Kelp	276	5	0	5	5	276	5	0	5	5	286	291
Norton Sd Her Beach Seine	0	2	0	2	3	0	2	0	2	3	4	7
Nelson Island Her Gillnet	153	7	0	9	9	136	6	0	9	7	169	178
Nunivak Island Her Gillnet	45	3	0	11	5	41	3	0	7	3	59	64
Lower Yukon Herring Gillnet	94	5	0	4	3	88	2	0	2	0	103	106
Norton Sound Herring Gillnet	152	27	7	46	63	152	27	7	46	63	232	295
	720	*49*	*7*	*77*	*88*	*693*	*45*	*7*	*71*	*81*	*853*	*941*

TABLE 3. Total Number of Initial Permit Holders by Permit Type and Resident Type

	All Permits Issued to					All Transferable Permits Issued to					All Permits	
Permits First Issued in:	AK Rural Local	Alaska Rural Nonlocal	Alaska Urban Local	Alaska Urban Nonlocal	Non-resident	AK Rural Local	Alaska Rural Nonlocal	Alaska Urban Local	Alaska Urban Nonlocal	Non-resident	Alaska Total	Grand Total
1997												
SE Dungeness Ring Net	4	0	4	0	0	0	0	0	0	0	8	8
SE Dungeness Dive	0	0	3	0	0	0	0	0	0	0	3	3
SE Dungeness 300 Pot	8	0	32	0	12	8	0	32	0	12	40	52
SE Dungeness 225 Pot	13	0	24	1	10	13	0	22	1	10	38	48
SE Dungeness 150 Pot	26	0	48	0	13	25	0	47	0	11	74	87
SE Dungeness 75 Pot	50	1	54	1	20	36	1	29	0	6	106	126
Cook Inlet Dunge Ring Net	1	0	0	0	0	0	0	0	0	0	1	1
Cook Inlet Dungeness Pot	58	3	6	2	2	49	2	4	2	2	69	71
	160	*4*	*171*	*4*	*57*	*131*	*3*	*134*	*3*	*41*	*339*	*396*
1998												
N. SE Her Pound	14	0	71	5	17	14	0	71	5	17	90	107
SSE Her Pound	129	0	65	1	14	99	0	42	1	11	195	209
SE Shrimp Otter Trawl	0	0	0	1	0	0	0	0	0	0	1	1
SE Shrimp Beam Trawl	17	0	10	0	5	12	0	8	0	3	27	32
SE Shrimp Pot	137	2	146	5	22	73	0	66	3	13	290	312
PWS Sablefish Net Gear	0	0	0	1	0	0	0	0	1	0	1	1
PWS Sablefish Fixed 90ft	1	0	0	0	0	1	0	0	0	0	1	1
PWS Sablefish Fixed 60ft	0	0	0	2	0	0	0	0	2	0	2	2
PWS Sablefish Fixed 50ft	5	8	0	15	4	5	8	0	15	4	28	32
PWS Sablefish Fixed 35ft	3	2	0	2	3	3	2	0	2	3	7	10
	306	*12*	*292*	*32*	*65*	*207*	*10*	*187*	*29*	*51*	*642*	*707*
1999-2002												
SE Urchin Dive	8	1	21	2	51	8	1	21	2	50	32	83
SE Geoduck Dive	14	0	39	3	55	4	0	11	1	34	56	111
SE Cucumber Dive	92	3	184	6	104	36	0	77	2	41	285	389
Goodnews Bay Her Gillnet	46	122	0	13	1	46	116	0	13	1	181	182
Kodiak Fd/Bt Her Seine/Gill	1	0	4	0	0	1	0	4	0	0	5	5
Kodiak Fd/Bt Her Trawl 75ft	0	0	0	0	1	0	0	0	0	1	0	1
Kodiak Fd/Bt Her Trawl 70ft	0	0	1	0	0	0	0	1	0	0	1	1
Kodiak Fd/Bt Her Trawl 60ft	0	0	0	0	2	0	0	0	0	2	0	2
	161	*126*	*249*	*24*	*214*	*95*	*117*	*114*	*18*	*129*	*560*	*774*
2004												
Kodiak Tnr Bairdi Pot 120ft	0	2	26	2	7	0	2	25	2	6	30	37
Kodiak Tnr Bairdi Pot 60ft	15	6	89	10	16	15	6	86	9	15	120	136
	15	*8*	*115*	*12*	*23*	*15*	*8*	*111*	*11*	*21*	*150*	*173*
Overall Total	***7,603***	***693***	***4,306***	***885***	***3,045***	***6,806***	***639***	***3,168***	***802***	***2,760***	***13,487***	***16,532***

TABLE 4. 2010 Year-end Distribution of Permit Holders by Permit Type and Resident Type*

Permits First Issued in:	All Permits Held By						All Transferable Permits Held By **						All Permits	
	ARL	ARN	AUL	AUN	NR	DCCED /CFAB	ARL	ARN	AUL	AUN	NR	DCCED /CFAB	AK Total	Grand Total
1975														
SE Salmon Seine	38	8	138	8	187	0	38	8	138	8	187	0	192	379
SE Salmon Drift Gillnet	135	3	222	7	106	0	135	3	222	7	106	0	367	473
Salmon Power Troll	266	9	493	12	182	0	266	9	493	12	182	0	780	962
Yakutat Salmon Setnet	102	10	0	20	35	0	102	10	0	20	35	0	132	167
PWS Salmon Seine	98	58	0	38	73	0	98	58	0	38	73	0	194	267
PWS Salmon Drift Gillnet	244	93	0	78	121	1	244	93	0	78	121	1	416	537
PWS Salmon Setnet	5	3	0	16	5	0	5	3	0	15	5	0	24	29
Cook Inlet Salmon Seine	63	0	11	1	7	0	63	0	11	1	7	0	75	82
Cook Inlet Salmon Drift	233	11	153	7	165	0	233	11	153	7	165	0	404	569
Cook Inlet Salmon Setnet	226	15	358	3	133	1	226	15	358	3	133	1	603	736
Kodiak Salmon Seine	37	49	155	40	94	0	37	49	155	40	94	0	281	375
Kodiak Salmon Beach Seine	6	5	9	2	9	0	6	5	9	2	9	0	22	31
Kodiak Salmon Setnet	16	5	95	17	55	0	16	5	95	17	55	0	133	188
Chignik Salmon Seine	40	12	0	22	17	0	40	12	0	22	17	0	74	91
Pen/Aleutian Salmon Seine	59	6	3	16	35	0	59	6	3	16	35	0	84	119
Pen/Aleutian Salmon Drift	37	38	1	17	69	0	37	38	1	17	69	0	93	162
Pen/Aleutian Salmon Setnet	74	3	1	16	19	0	74	3	1	16	19	0	94	113
Bristol Bay Salmon Drift	383	174	0	297	1,009	0	383	174	0	297	1,009	0	854	1,863
Bristol Bay Salmon Setnet	353	61	0	250	317	1	317	58	0	240	303	1	665	982
	2,415	*563*	*1,639*	*867*	*2,638*	*3*	*2,379*	*560*	*1,639*	*856*	*2,624*	*3*	*5,487*	*8,125*
1976														
Upper Yukon Salmon Gillnet	24	2	29	2	1	0	24	2	29	2	1	0	57	58
U Yukon Salmon Fish Wheel	76	4	27	7	1	0	76	4	27	7	1	0	114	115
Kuskokwim Salmon Gillnet	553	3	156	23	6	0	553	3	156	23	6	0	735	741
Kotzebue Salmon Gillnet	23	5	112	18	2	0	23	5	112	18	2	0	158	160
Lower Yukon Salmon Gillnet	563	24	0	78	5	0	563	24	0	78	5	0	665	670
Norton Sound Salmon Gillnet	146	3	14	10	0	0	146	3	14	10	0	0	173	173
	1,385	*41*	*338*	*138*	*15*	*0*	*1,385*	*41*	*338*	*138*	*15*	*0*	*1,902*	*1,917*
1977-78														
SE Roe Herring Seine	5	7	18	5	12	0	5	7	18	5	12	0	35	47
SE Herring Gillnet	23	0	59	1	28	0	23	0	59	1	28	0	83	111
PWS Roe Herring Seine	24	31	0	23	27	0	24	31	0	23	27	0	78	105
Cook Inlet Herring Seine	32	5	6	10	22	0	32	5	6	10	22	0	53	75
	84	*43*	*83*	*39*	*89*	*0*	*84*	*43*	*83*	*39*	*89*	*0*	*249*	*338*
1980-87														
Salmon Hand Troll	389	9	495	27	125	0	275	5	341	16	98	0	920	1,045
NSEI Sablefish Longline	9	3	41	2	16	0	9	3	41	2	16	0	55	71
SSEI Sablefish Longline	0	1	10	0	2	0	0	1	10	0	2	0	11	13
SSEI Sablefish Pots	2	0	0	0	1	0	2	0	0	0	0	0	2	3
SE Red, Blue King Crab Pot	0	0	6	0	0	0	0	0	6	0	0	0	6	6
SE Red,Bl,Brn King Crab Pot	1	0	5	0	0	0	1	0	4	0	0	0	6	6
SE Brown King Crab Pot	0	0	8	0	0	0	0	0	4	0	0	0	8	8
SE Red, Bl King/Tanner Pot	1	0	11	1	1	0	1	0	11	1	1	0	13	14
SE Brown King/Tanner Pot	2	0	2	0	1	0	2	0	1	0	1	0	4	5
SE All King/Tanner Pot	2	0	24	0	3	0	2	0	22	0	3	0	26	29
SE Tanner Crab Pot	5	0	15	0	5	0	5	0	14	0	1	0	20	25
PWS Roe Herring Gillnet	16	0	0	6	2	0	16	0	0	6	2	0	22	24
PWS Herring ROK	42	22	0	20	44	0	42	22	0	20	44	0	84	128
Kodiak Roe Herring Seine	6	18	26	7	11	0	4	17	23	7	6	0	57	68
Kodiak Roe Herring Gillnet	7	14	48	11	15	1	7	13	40	8	12	1	81	96
Kodiak Roe Her Seine/Gill	1	0	1	0	0	0	0	0	1	0	0	0	2	2
	483	*67*	*692*	*74*	*226*	*1*	*366*	*61*	*518*	*60*	*186*	*1*	*1,317*	*1,543*
1988-91														
BBay Herring Spawn on Kelp	231	9	0	13	11	2	231	9	0	13	11	2	255	266
Norton Sd Her Beach Seine	0	1	0	2	3	0	0	1	0	2	3	0	3	6
Nelson I Herring Gillnet	117	6	0	10	4	0	101	5	0	9	2	0	133	137
Nunivak I Herring Gillnet	22	1	0	9	4	0	21	1	0	8	4	0	32	36
Lower Yukon Herring Gillnet	52	1	0	2	0	0	49	1	0	2	0	0	55	55
Norton Sound Herring Gillnet	108	44	7	35	62	0	108	44	7	35	62	0	194	256
	530	*62*	*7*	*71*	*84*	*2*	*510*	*61*	*7*	*69*	*82*	*2*	*672*	*756*

TABLE 4. 2010 Year-end Distribution of Permit Holders by Permit Type and Resident Type*

	All Permits Held By						All Transferable Permits Held By **						All Permits	
Permits First Issued in:	ARL	ARN	AUL	AUN	NR	DCCED /CFAB	ARL	ARN	AUL	AUN	NR	DCCED /CFAB	AK Total	Grand Total
1997														
SE Dungeness Ring Net	2	0	1	0	0	0	0	0	0	0	0	0	3	3
SE Dungeness Dive	0	0	1	0	1	0	0	0	0	0	0	0	1	2
SE Dungeness 300 Pot	5	0	38	0	6	0	5	0	38	0	6	0	43	49
SE Dungeness 225 Pot	12	0	25	0	6	0	12	0	25	0	6	0	37	43
SE Dungeness 150 Pot	32	0	36	1	16	0	31	0	35	1	14	0	69	85
SE Dungeness 75 Pot	38	1	50	2	21	0	30	1	28	0	12	0	91	112
Cook Inlet Dungeness Pot	55	2	8	2	3	0	46	1	7	2	3	0	67	70
	144	*3*	*159*	*5*	*53*	*0*	*124*	*2*	*133*	*3*	*41*	*0*	*311*	*364*
1998														
N. SE Her Pound	14	0	79	0	13	0	14	0	79	0	13	0	93	106
S. SE Her Pound	77	0	75	1	21	0	63	0	64	1	20	0	153	174
SE Shrimp Otter Trawl	0	0	0	1	0	0	0	0	0	0	0	0	1	1
SE Shrimp Beam Trawl	12	0	11	0	3	0	9	0	10	0	3	0	23	26
SE Shrimp Pot	109	1	116	3	27	1	64	1	64	2	22	1	230	257
PWS Sablefish Net Gear	0	0	0	1	0	0	0	0	0	1	0	0	1	1
PWS Sablefish Fixed 90ft	1	0	0	0	0	0	1	0	0	0	0	0	1	1
PWS Sablefish Fixed 60ft	0	2	0	0	0	0	0	2	0	0	0	0	2	2
PWS Sablefish Fixed 50ft	8	5	0	16	3	0	8	5	0	16	3	0	29	32
PWS Sablefish Fixed 35ft	5	3	0	1	0	0	5	3	0	1	0	0	9	9
	226	*11*	*281*	*23*	*67*	*1*	*164*	*11*	*217*	*21*	*61*	*1*	*542*	*609*
1999-2002														
SE Urchin Dive	3	0	24	2	42	0	3	0	24	2	42	0	29	71
SE Geoduck Dive	14	2	37	1	37	0	4	2	18	0	25	0	54	91
SE Cucumber Dive	71	3	140	6	71	0	34	3	77	3	39	0	220	291
Goodnews Bay Her Gillnet	31	82	0	14	1	0	31	81	0	14	1	0	127	128
Kodiak Fd/Bt Her Seine/Gill	1	0	4	0	0	0	1	0	4	0	0	0	5	5
Kodiak Fd/Bt Her Trawl 75ft	0	0	0	0	1	0	0	0	0	0	1	0	0	1
Kodiak Fd/Bt Her Trawl 70ft	0	0	1	0	0	0	0	0	1	0	0	0	1	1
Kodiak Fd/Bt Her Trawl 60ft	0	0	0	0	2	0	0	0	0	0	2	0	0	2
	120	*87*	*206*	*23*	*154*	*0*	*73*	*86*	*124*	*19*	*110*	*0*	*436*	*590*
2004														
Kodiak Tannr Bairdi Pot 120ft	0	1	25	2	9	0	0	1	24	2	8	0	28	37
Kodiak Tanner Bairdi Pot 60ft	13	16	84	10	12	1	13	16	82	9	10	1	124	136
	13	*17*	*109*	*12*	*21*	*1*	*13*	*17*	*106*	*11*	*18*	*1*	*152*	*173*
Overall Total	***5,400***	***894***	***3,514***	***1,252***	***3,347***	***8***	***5,098***	***882***	***3,165***	***1,216***	***3,226***	***8***	***11,068***	***14,415***

* This table excludes 2,117 permits which were cancelled by CFEC and not reinstated, summed over the entire period.

** By 2010, the net effects of transferable and nontransferable permits changing status through the CFEC adjudication process resulted in the addition of 128 transferable permits.

ARL - Alaskan Rural Local
ARN - Alaskan Rural Nonlocal
AUL - Alaskan Urban Local
AUN - Alaskan Urban Nonlocal
NR - Nonresident
DCCED/CFAB - Department of Commerce, Community and Economic Development/Commercial Fishing and Agriculture Bank

Table 5. Net Changes in Permit Holdings Due to Transfers, Migrations, and Cancellations, by Permit and Resident Type, 1975-2010

Permits Issued in:	Alaska Rural Local			Alaska Rural Nonlocal			Alaska Urban Local			Alaska Urban Nonlocal			Nonresident			DCCED /CFAB
	Transfers	Migrations	Cancelled	Transfers	Migrations	Cancelled	Transfers	Migrations	Cancelled	Transfers	Migrations	Cancelled	Transfers	Migrations	Cancelled	
1975																
SE Salmon Seine	-66	1	3	4	4	0	52	-14	6	16	-5	3	-6	14	28	0
SE Salmon Drift Gillnet	-4	22	1	12	-10	0	42	-14	1	-2	5	0	-48	-3	0	0
Salmon Power Troll	69	-65	2	1	3	0	64	26	3	5	-2	2	-139	38	3	0
Yakutat Salmon Setnet	-6	-19	2	10	-3	0	0	0	0	-11	10	1	7	12	2	0
PWS Salmon Seine	-42	-45	1	47	-1	0	0	0	0	3	21	0	-8	25	-1	0
PWS Salmon Drift Gillnet	-56	-49	1	101	-28	0	0	0	0	15	34	-1	-61	43	0	1
PWS Salmon Setnet	-12	-4	0	3	0	0	0	0	0	12	3	1	-3	1	0	0
Cook Inlet Salmon Seine	-7	-5	1	2	-2	0	3	2	1	3	-3	0	-1	8	1	0
Cook Inlet Salmon Drift	58	8	0	3	-3	0	9	-52	1	-4	0	0	-66	47	3	0
Cook Inlet Salmon Setnet	18	11	5	-6	5	0	-30	-53	5	-9	-14	0	26	51	0	1
Kodiak Salmon Seine	-13	-23	3	17	7	0	62	-67	2	15	17	2	-81	66	2	0
Kodiak Salmon Beach Seine	0	-6	1	1	2	0	6	-1	2	-1	2	0	6	3	2	0
Kodiak Salmon Setnet	-7	-21	0	-2	4	0	50	-32	0	-4	8	0	-37	41	0	0
Chignik Salmon Seine	4	7	0	4	-4	0	0	0	0	1	-8	0	-9	5	0	0
Pen/Aleutian Salmon Seine	-34	-7	1	3	3	0	1	0	0	7	6	0	23	-2	1	0
Pen/Aleutian Salmon Drift	61	0	0	38	-1	0	2	-2	0	11	-7	0	10	10	0	0
Pen/Aleutian Salmon Setnet	5	-28	2	4	-1	0	1	0	0	-11	19	1	1	10	0	0
Bristol Bay Salmon Drift	261	-65	4	16	-26	0	0	0	0	90	-23	2	155	114	6	0
Bristol Bay Salmon Setnet	-155	-126	27	11	-5	9	0	0	0	56	48	15	87	83	8	1
	-570	***-414***	***54***	***269***	***-56***	***9***	***250***	***-207***	***21***	***192***	***111***	***26***	***-144***	***566***	***55***	***3***
1976																
Upper Yukon Salmon Gillnet	-2	-23	7	-1	1	1	3	14	1	2	3	5	-2	5	3	0
U Yukon Salmon Fish Wheel	2	-35	32	3	7	2	4	16	11	-2	9	2	-1	3	3	0
Kuskokwim Salmon Gillnet	26	-71	67	-7	9	1	-5	9	20	-14	44	7	0	9	3	0
Kotzebue Salmon Gillnet	-7	-11	13	1	4	3	12	-29	28	4	28	11	-2	8	5	0
Lower Yukon Salmon Gillnet	26	-111	32	-29	36	2	0	0	0	9	62	5	-6	13	3	0
Norton Sound Salmon Gillnet	13	-31	14	-5	9	2	-5	2	8	-5	19	5	2	1	3	0
	58	***-282***	***165***	***-44***	***66***	***11***	***9***	***12***	***66***	***-14***	***165***	***36***	***-9***	***39***	***20***	***0***
1977-78																
SE Roe Herring Seine	2	-1	0	7	0	0	-19	1	1	5	0	0	5	0	-1	0
SE Herring Gillnet	4	1	0	1	-1	0	5	-11	0	0	0	0	-10	11	0	0
PWS Roe Herring Seine	6	-14	0	-7	-4	0	0	0	0	8	-5	0	-7	23	0	0
Cook Inlet Herring Seine	-8	-6	0	-1	3	0	-1	3	0	13	-17	0	-3	17	0	0
	4	***-20***	***0***	***0***	***-2***	***0***	***-15***	***-7***	***1***	***26***	***-22***	***0***	***-15***	***51***	***-1***	***0***
1980-87																
Salmon Hand Troll	-28	-78	297	5	5	11	-16	-67	577	-3	25	43	42	115	188	0
NSEI Sablefish Longline	5	-4	0	1	0	0	3	1	0	2	2	0	-7	1	0	0
SSEI Sablefish Longline	0	0	0	1	0	0	2	-2	0	-1	1	0	-2	1	0	0
SSEI Sablefish Pots	1	-	0	0	-	0	1	-	0	0	-	0	0	-	0	0
SE Red,Blue King Crab Pot	-1	-	0	0	-	0	3	-	0	0	-	0	-2	-	0	0
SE Red,Blue,Brn Kng Crb Pot	1	-	0	0	-	0	0	-	0	0	-	0	-1	-	1	0
SE Brown King Crab Pot	0	-	0	0	-	0	1	-	1	0	-	0	-1	-	0	0
SE Red,Blue King/Tanner Pot	0	0	0	0	0	0	2	-3	0	0	1	0	-2	2	0	0
SE Brown King/Tanner Pot	1	-	0	0	-	0	0	-	0	0	-	0	-1	-	1	0
SE All King/Tanner Pot	-3	0	0	1	-1	0	2	0	0	0	0	0	0	1	0	0
SE Tanner Crab Pot	1	2	0	-1	0	0	5	-3	0	0	0	0	-5	1	0	0
PWS Roe Herring Gillnet	2	-6	0	1	-1	0	0	0	0	2	4	0	-5	3	0	0
PWS Her Spawn on Klp Pound	-2	-24	-1	13	1	0	0	0	0	0	3	0	-11	20	1	0
Kodiak Roe Herring Seine	5	-10	0	11	2	5	-10	-6	2	3	3	1	-9	11	5	0
Kodiak Roe Herring Gillnet	3	0	1	-6	-2	7	4	-3	6	-1	-3	4	-1	8	5	1
Kodiak Roe Her Seine/Gill	-	1	0	-	0	0	-	0	0	-	0	0	-	-1	0	-
	-15	***-119***	***297***	***26***	***4***	***23***	***-5***	***-83***	***586***	***-2***	***36***	***48***	***-5***	***162***	***201***	***1***

Table 5. Net Changes in Permit Holdings Due to Transfers, Migrations, and Cancellations, by Permit and Resident Type, 1975-2010

Permits Issued in:	Alaska Rural Local			Alaska Rural Nonlocal			Alaska Urban Local			Alaska Urban Nonlocal			Nonresident			DCCED /CFAB
	Transfers	Migrations	Cancelled	Transfers	Migrations	Cancelled	Transfers	Migrations	Cancelled	Transfers	Migrations	Cancelled	Transfers	Migrations	Cancelled	
1988-91																
BBay Herring Spawn on Kelp	2	-25	22	0	4	0	0	0	0	-2	12	2	-2	9	1	2
Norton Sd Her Beach Seine	0	0	0	0	-1	0	0	0	0	0	0	0	0	1	1	0
Nelson Island Her Gillnet	10	-12	34	-1	1	1	0	0	0	-7	9	1	-2	2	5	0
Nunivak Island Her Gillnet	0	-5	18	0	-1	1	0	0	0	0	5	7	0	1	2	0
Lower Yukon Herring Gillnet	1	-2	41	0	1	5	0	0	0	-1	1	2	0	0	3	0
Norton Sd Herring Gillnet	-24	-7	13	28	-10	1	1	0	1	-15	11	7	10	8	17	0
	-11	***-51***	***128***	***27***	***-6***	***8***	***1***	***0***	***1***	***-25***	***38***	***19***	***6***	***19***	***29***	***2***
1997																
SE Dungeness Ring Net	-	-	2	-	-	0	-	-	3	-	-	0	-	-	0	-
SE Dungeness Dive	-	0	0	-	0	0	-	-2	0	-	0	0	-	2	1	-
SE Dungeness 300 Pot	0	-1	2	0	0	0	9	-3	0	1	-1	0	-10	5	1	0
SE Dungeness 225 Pot	2	-2	1	0	0	0	5	-2	2	-2	1	0	-5	3	2	0
SE Dungeness 150 Pot	10	-3	1	0	0	0	-10	-2	0	-3	4	0	3	1	1	0
SE Dungeness 75 Pot	-5	-4	3	1	-1	0	-1	2	5	0	1	0	5	2	6	0
Cook Inlet Dunge Ring Net	-	-	1	-	-	0	-	-	0	-	-	0	-	-	0	-
Cook Inlet Dungeness Pot	0	-2	1	0	-1	0	0	2	0	0	0	0	0	1	0	0
	7	***-12***	***11***	***1***	***-2***	***0***	***3***	***-5***	***10***	***-4***	***5***	***0***	***-7***	***14***	***11***	***0***
1998																
NSE Her Spawn on Klp Pound	0	0	0	-1	1	0	13	-4	1	-4	-1	0	-8	4	0	0
SSE Her Spawn on Klp Pound	-23	-15	14	1	-1	0	22	1	13	0	0	0	0	15	8	0
SE Shrimp Otter Trawl	-	-	0	-	-	0	-	-	0	-	-	0	-	-	0	-
SE Shrimp Beam Trawl	-2	0	3	0	0	0	2	0	1	0	0	0	0	0	2	0
SE Shrimp Pot	-10	0	18	1	-1	1	5	-14	21	-2	4	4	5	11	11	1
PWS Sablefish Net Gear	-	-	0	-	-	0	-	-	0	-	-	0	-	-	0	-
PWS Sablefish Fixed 90ft	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0
PWS Sablefish Fixed 60ft	0	-	0	2	-	0	0	-	0	-2	-	0	0	-	0	0
PWS Sablefish Fixed 50ft	2	1	0	-1	-2	0	0	0	0	2	-1	0	-3	2	0	0
PWS Sablefish Fixed 35ft	3	-1	0	0	2	1	0	0	0	-1	0	0	-2	-1	0	0
	-30	***-15***	***35***	***2***	***-1***	***2***	***42***	***-17***	***36***	***-7***	***2***	***4***	***-8***	***31***	***21***	***1***
1999-2002																
SE Urchin Dive	-2	-3	0	0	0	1	1	4	2	-2	2	0	3	-3	9	0
SE Geoduck Dive	1	-1	0	1	1	0	7	0	9	1	-2	1	-10	2	10	0
SE Cucumber Dive	2	-7	16	0	1	1	9	-15	38	0	5	5	-11	16	38	0
Goodnews Bay Her Gillnet	0	-1	14	0	-9	31	0	0	0	-1	10	8	1	0	1	0
Kodiak Fd/Bt Her Seine/Gill	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0
Kodiak Fd/Bt Her Trawl 75ft	-	-	0	-	-	0	-	-	0	-	-	0	-	-	0	-
Kodiak Fd/Bt Her Trawl 70ft	-	-	0	-	-	0	-	-	0	-	-	0	-	-	0	-
Kodiak Fd/Bt Her Trawl 60ft	-	-	0	-	-	0	-	-	0	-	-	0	-	-	0	-
	1	***-12***	***30***	***1***	***-7***	***33***	***17***	***-11***	***49***	***-2***	***15***	***14***	***-17***	***15***	***58***	***0***
2004																
Kodiak Tannr Bairdi Pot 120ft	0	0	0	-1	0	0	1	-2	0	-1	1	0	1	1	0	0
Kodiak Tanner Bairdi Pot 60ft	-2	0	0	8	2	0	-3	-2	0	-2	2	0	-2	-2	0	1
	-2	***0***	***0***	***7***	***2***	***0***	***-2***	***-4***	***0***	***-3***	***3***	***0***	***-1***	***-1***	***0***	***1***
Net Shifts 1975-2010	***-558***	***-925***	***720***	***289***	***-2***	***86***	***300***	***-322***	***770***	***161***	***353***	***147***	***-200***	***896***	***394***	***8***

Table 6. Summary of Annual Net Changes in Statewide Permit Ownership

	Alaska Rural Local				Alaska Rural Nonlocal				Alaska Urban Local				Alaska Urban Nonlocal				Nonresident				DCCED /CFAB
Year	Transfer	Migrate	Cancel	Net	Transfer	Migrate	Cancel	Net	Transfer	Migrate	Cancel	Net	Transfer	Migrate	Cancel	Net	Transfer	Migrate	Cancel	Net	Transfer
1975	24	0	-1	23	5	0	0	5	25	0	-2	23	5	0	-1	4	-59	0	0	-59	0
1976	-22	49	-1	26	2	11	0	13	27	-2	0	25	-3	-22	-1	-26	-4	-36	0	-40	0
1977	-62	-17	0	-79	-8	-7	0	-15	52	-1	0	51	6	4	0	10	12	21	0	33	0
1978	-70	-28	-3	-101	-5	-5	-1	-11	45	-22	0	23	24	-28	-1	-5	6	83	0	89	0
1979	-81	13	-2	-70	6	11	0	17	8	-19	0	-11	37	-14	0	23	30	9	0	39	0
1980	-94	8	-3	-89	8	-11	0	-3	40	-20	0	20	36	11	0	47	10	12	0	22	0
1981	-84	4	0	-80	-4	7	0	3	27	-11	-1	15	47	5	0	52	14	-5	0	9	0
1982	-81	-45	-1	-127	4	17	0	21	-15	25	0	10	27	31	0	58	56	-28	-1	27	9
1983	-86	31	-5	-60	13	1	0	14	-1	14	-2	11	62	2	-1	63	8	-48	0	-40	4
1984	-59	28	0	-31	-5	15	0	10	-19	-31	0	-50	13	0	-1	12	74	-12	-2	60	-4
1985	-24	-1	-32	-57	19	4	-3	20	-27	-1	-75	-103	3	7	-5	5	28	-9	-27	-8	1
1986	-50	-15	-10	-75	25	8	0	33	-7	-18	-36	-61	44	-4	-2	38	11	29	-6	12	-1
1987	-10	-11	-12	-33	27	-1	-1	25	-17	-24	-30	-71	7	2	-3	6	-5	34	-4	25	-2
1988	-22	-26	-10	-58	16	10	-1	25	-8	-29	-37	-74	-3	-6	-4	-13	20	51	-14	57	-3
1989	-19	-25	-13	-57	24	-9	-1	14	-2	-31	-30	-63	5	-13	-1	-9	-6	78	-12	60	-2
1990	7	-99	-10	-102	8	0	-1	7	-28	11	-18	-35	5	40	-1	44	7	48	-6	49	1
1991	-11	-13	-13	-37	21	-2	0	19	-9	-26	-23	-58	-7	14	-1	6	8	27	-6	29	-2
1992	-5	23	-16	2	-4	-7	-1	-12	-1	-17	-34	-52	-20	5	-6	-21	24	-4	-3	17	6
1993	-14	-34	-14	-62	9	-16	1	-6	-2	14	-35	-23	9	5	-8	6	1	31	-10	22	-3
1994	3	-19	-18	-34	-3	6	-4	-1	-10	-23	-26	-59	-8	13	0	5	14	23	-7	30	4
1995	2	-49	-17	-64	19	-6	-1	12	-6	-18	-23	-47	-11	35	-8	16	-1	38	-9	28	-3
1996	-12	-40	-12	-64	9	26	0	35	1	-26	-21	-46	-22	-8	-3	-33	23	48	-14	57	1
1997	27	-34	-17	-24	-2	-9	-3	-14	22	-3	-26	-7	4	2	-1	5	-56	44	-9	-21	5
1998	1	-25	-25	-49	8	-21	-4	-17	13	-9	-31	-27	-11	23	-2	10	-16	32	-13	3	5
1999	23	-71	-20	-68	1	-2	-1	-2	17	-7	-19	-9	-3	48	-6	39	-38	32	-18	-24	0
2000	49	-72	-29	-52	-2	6	-4	0	19	-25	-29	-35	-7	21	-3	11	-59	70	-9	2	0
2001	12	-73	-31	-92	17	-10	-4	3	20	-6	-26	-12	6	45	-3	48	-64	44	-17	-37	9
2002	12	-90	-37	-115	-5	-14	-3	-22	2	17	-28	-9	-23	31	-5	3	15	56	-14	27	29
2003	16	-49	-80	-113	-12	-4	-5	-21	22	2	-44	-20	-14	8	-13	-19	-33	43	-40	-30	21
2004	19	-62	-125	-168	-10	6	-14	-18	15	-14	-43	-42	5	27	-18	14	-38	43	-31	-26	9
2005	5	-52	-39	-86	10	-8	-8	-6	21	-10	-32	-21	10	28	-9	29	-28	42	-22	-8	-18
2006	3	-26	-51	-74	18	1	-7	12	22	10	-19	13	-7	14	-12	-5	-20	1	-7	-26	-16
2007	29	-16	-22	-9	17	-10	-13	-6	0	-11	-29	-40	-9	0	-8	-17	-9	37	-24	4	-28
2008	-2	-16	-23	-41	24	-3	-6	15	16	-14	-24	-22	-4	17	-18	-5	-25	16	-47	-56	-9
2009	10	-46	-13	-49	17	11	-1	27	-2	-8	-13	-23	-25	-12	-2	-39	-1	55	-12	42	1
2010	8	-27	-15	-34	22	3	0	25	40	11	-14	37	-17	22	0	5	-47	-9	-10	-66	-6
Total	**-558**	**-925**	**-720**	**-2,203**	**289**	**-2**	**-86**	**201**	**300**	**-322**	**-770**	**-792**	**161**	**353**	**-147**	**367**	**-200**	**896**	**-394**	**302**	**8**

Age Patterns Among Permit Holders

Figure 1 compares the annual mean ages of all persons who transferred permits (transferors), with all persons who received permits through transfer (recipients), and the combined total of all persons who hold transferable permits. The statewide mean age of all transferable permit holders decreased from 43 years in 1975 to 41 years in 1977 and remained at about that level through 1985. Since then, the mean age has increased slightly each year, and by the end of 2010 it had risen to 49.3 years. The increased mean age of transferable permit holders in recent years may be related to reduced transfer activity as well as an increased mean age of transferors and transfer recipients. The mean age of transfer recipients increased sharply in 2001, but declined from 2003 through 2006. At year-end 2010, the mean age of transfer recipients was 40.1.[5]

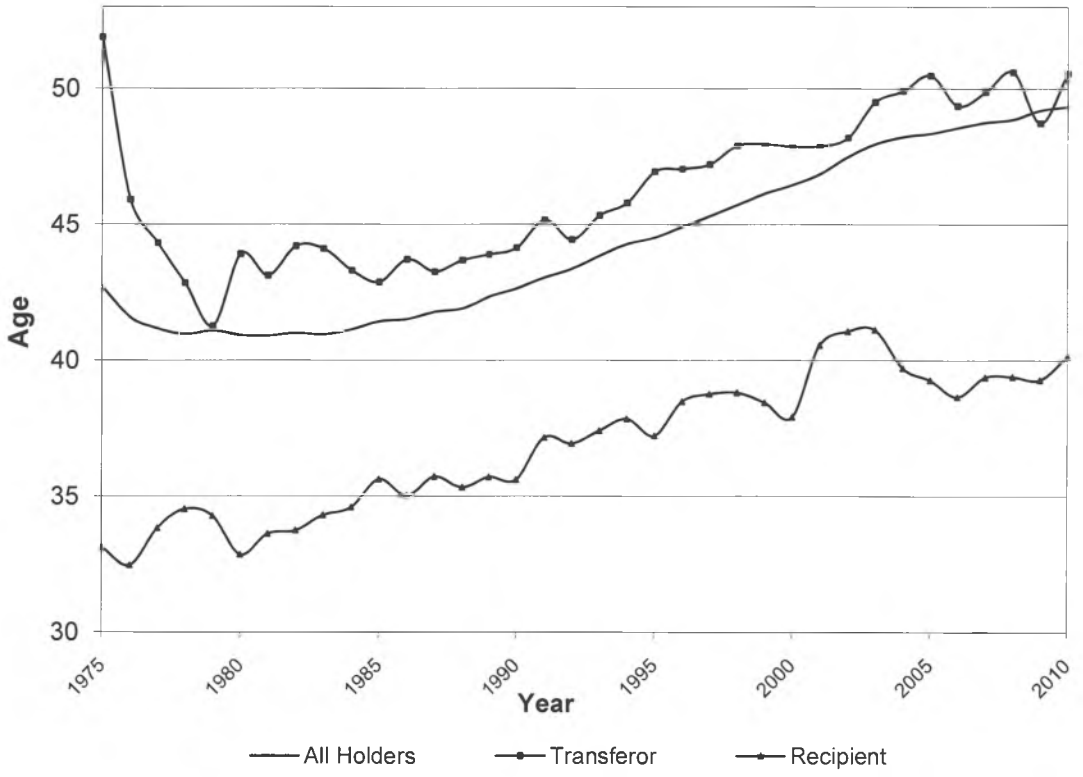


Figure 1. Mean ages of permit holders with transferable limited entry permits: transferors, transfer recipients, and all permit holders.

Transfer Survey Results

When limited entry permits are transferred, CFEC conducts a survey of the transfer participants. The survey collects information on whether the transfer was a gift, sale, or trade, and collects information on the relationships between the parties in the transfers.[6] If the permit is sold, the survey asks for the sale price and the type of financing used. This survey is the source of information for CFEC's estimates of permit values, which are used to make fishing loans by the DCCED and by CFAB. Survey results from the 1980-2010 time period are presented in both this summary and in the main report.

Since 1980, it has been mandatory for the transfer recipient to complete the survey; however, this was not strictly enforced until 1981. There were 139 transfers in 1980 and 15 transfers in 1981 without completed surveys. In other years, there have been only small numbers of transfers with missing surveys, the majority of which are transfers to the two lending agencies on foreclosed permits. These missing surveys account for the slight differences between Table 1 and the tables in this section.

Table 7. Relationship of Transferors to Transfer Recipients; All Fisheries by Year*

Year	Friend/Partner		Immediate Family		Other Relative		Other		Total
1980	286	31.1%	329	35.8%	56	6.1%	249	27.1%	920
1981	359	33.3%	348	32.3%	59	5.5%	310	28.8%	1,077
1982	375	33.1%	367	32.4%	57	5.0%	334	29.5%	1,133
1983	352	29.4%	396	33.0%	97	8.1%	354	29.5%	1,199
1984	216	20.6%	358	34.2%	52	5.0%	421	40.2%	1,047
1985	200	18.2%	339	30.8%	42	3.8%	520	47.2%	1,101
1986	202	17.2%	365	31.0%	52	4.4%	557	47.4%	1,176
1987	212	19.2%	306	27.6%	73	6.6%	516	46.6%	1,107
1988	187	16.8%	340	30.6%	50	4.5%	533	48.0%	1,110
1989	134	14.7%	357	39.3%	44	4.8%	374	41.1%	909
1990	144	15.2%	339	35.8%	38	4.0%	427	45.0%	948
1991	144	15.6%	331	35.8%	41	4.4%	408	44.2%	924
1992	127	13.5%	351	37.3%	41	4.4%	423	44.9%	942
1993	106	12.5%	334	39.4%	48	5.7%	360	42.5%	848
1994	143	16.0%	342	38.2%	44	4.9%	367	41.0%	896
1995	167	16.7%	335	33.5%	39	3.9%	460	46.0%	1,001
1996	140	14.9%	338	36.1%	46	4.9%	413	44.1%	937
1997	150	15.7%	313	32.8%	41	4.3%	450	47.2%	954
1998	150	17.6%	314	36.8%	46	5.4%	343	40.2%	853
1999	135	16.9%	288	36.0%	40	5.0%	336	42.1%	799
2000	175	18.5%	323	34.1%	29	3.1%	419	44.3%	946
2001	166	17.7%	346	36.9%	30	3.2%	395	42.2%	937
2002	159	21.3%	218	29.2%	39	5.2%	330	44.2%	746
2003	147	16.2%	299	33.0%	34	3.8%	425	47.0%	905
2004	149	15.6%	284	29.7%	48	5.0%	476	49.7%	957
2005	184	16.3%	337	29.9%	57	5.1%	549	48.7%	1,127
2006	159	15.6%	332	32.7%	54	5.3%	471	46.4%	1,016
2007	170	15.9%	318	29.7%	57	5.3%	527	49.2%	1,072
2008	148	13.7%	355	32.9%	49	4.5%	528	48.9%	1,080
2009	175	18.2%	318	33.2%	35	3.6%	431	44.9%	959
2010	189	16.2%	371	31.8%	44	3.8%	564	48.3%	1,168
	5,750	**18.7%**	**10,291**	**33.4%**	**1,482**	**4.8%**	**13,270**	**43.1%**	**30,794**

Notes: 1) * Transfer survey information is not included for 342 permit foreclosures. However, 334 subsequent transfers of these permits are included in the "other" category.

2). Surveys for 1981 include one transfer for the Yakutat Salmon Setnet permit type where the relationship was not indicated.

Relationships of Transfer Participants

Most permits are transferred between people who know one another. Table 7 shows that of the 30,794 transfer surveys received between 1980 and 2010, 38.2% indicated a transfer between immediate family members or other relatives, and 18.7% indicated a transfer between friends or business partners. Permit exchanges between people who appear to have no pre-existing relationship accounted for the remaining 43.1% of the transfers.

The percentage of transfers between friends and business partners decreased significantly in 1983. The rewording of the "Friend" category on the survey form to "Personal Friend" may be responsible for some of the decrease. It may also account for the relatively sharp increase in the number of transfers between persons in the "Other" category.

Relationships of Transfer Participants, by Residency

The relationship between transferors and transfer recipients varies considerably between resident types (Figure 2) of Alaska Rural Locals and the other resident types. Over half (54.4%) of the transfers to Alaska Rural Locals, for all years combined, were from immediate family members or relatives, and nearly three-quarters (71.4%) were from family, relatives, friends, or partners. In the remaining resident types, the "Other" category predominated. Alaska Rural Nonlocal, Alaska Urban Local, Alaska Urban Nonlocal and the Nonresident have similar distributions across cohorts.

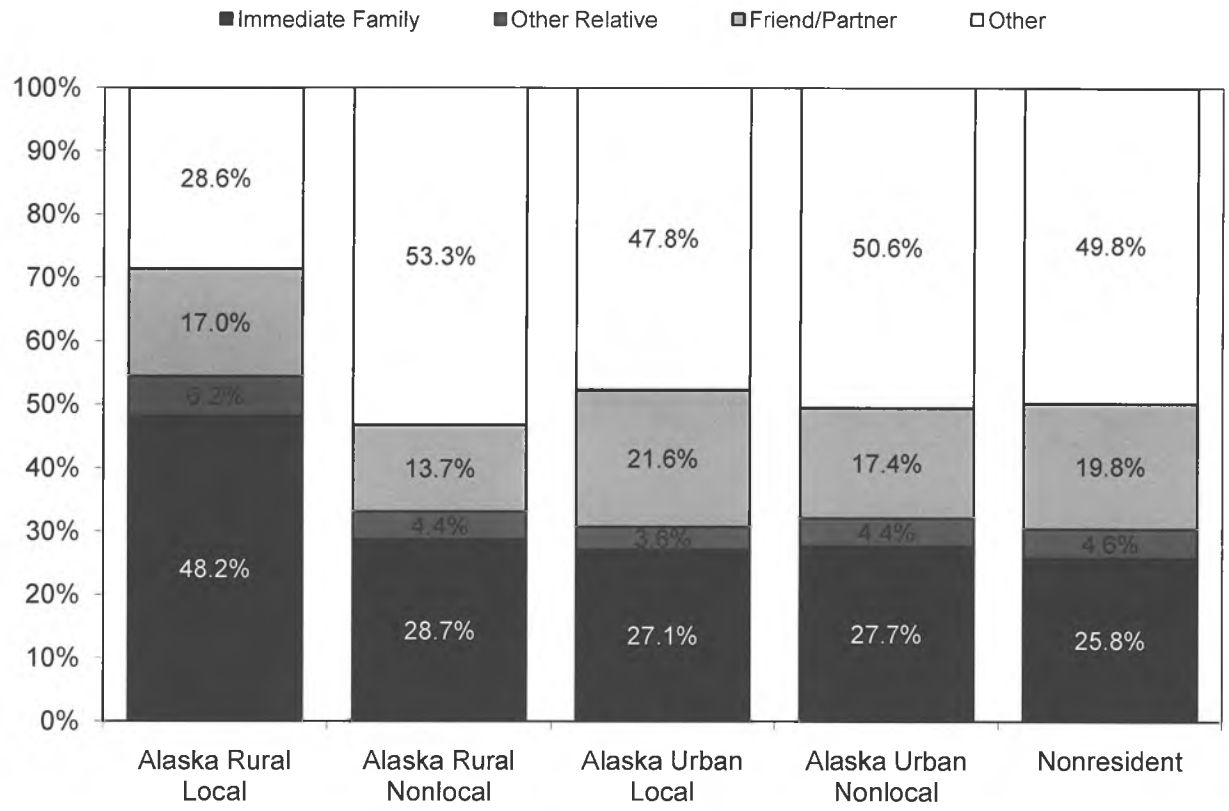


Figure 2. Transfers to the resident type: Relationship between the transferor and the permit recipient

Permit Acquisition Method: Gift, Sale, Trade, and Other

Under the Limited Entry Act's terms of free transferability, permits may be sold, traded, given away, or inherited. During the 1980-2010 period, 59.9% of all transfers were sales, 35.1% were gifts, and 1.4% were trades. The remaining transfers in the "Other" category comprised 3.5% of the survey responses (Table 8).

The incidence of gift transactions has accounted for roughly 30-40% of all transfers since 1980. Because gifts accounted for only 21.5% of all transfer survey responses in the 1975-1979 period,[7] it has been suggested that the 1980-2010 percentage may be a result of efforts to enforce the Limited Entry Act's prohibitions against leasing permits. Therefore, some of the "Gift" responses may actually represent lease arrangements, or carry reciprocal expectations.

The highest volume and percentage of sale transfers were from 1985 through 1988.

Individual fisheries often differ considerably from the statewide averages. Tables in the principal report show that while sale transactions predominated for most fisheries, there were 13 permit types where at least half the transfers were gifts (Table 9).

Table 8. Transfer Acquisition Methods, All Fisheries by Year

Year	Gift**		Sale		Trade		Other		Total
1980	364	39.6%	513	55.8%	26	2.8%	17	1.8%	920
1981	387	35.9%	647	60.1%	15	1.4%	28	2.6%	1,077
1982	413	36.5%	685	60.5%	22	1.9%	13	1.1%	1,133
1983	442	36.9%	709	59.1%	30	2.5%	18	1.5%	1,199
1984	399	38.1%	618	59.0%	19	1.8%	11	1.1%	1,047
1985	369	33.5%	703	63.9%	21	1.9%	8	0.7%	1,101
1986	372	31.6%	771	65.6%	20	1.7%	13	1.1%	1,176
1987	333	30.1%	722	65.2%	19	1.7%	33	3.0%	1,107
1988	332	29.9%	712	64.1%	12	1.1%	54	4.9%	1,110
1989	280	30.8%	515	56.7%	21	2.3%	93	10.2%	909
1990	314	33.1%	555	58.5%	15	1.6%	64	6.8%	948
1991	286	31.0%	548	59.3%	14	1.5%	76	8.2%	924
1992	329	34.9%	539	57.2%	11	1.2%	63	6.7%	942
1993	332	39.2%	446	52.6%	22	2.6%	48	5.7%	848
1994	341	38.1%	500	55.8%	9	1.0%	46	5.1%	896
1995	336	33.6%	607	60.6%	10	1.0%	48	4.8%	1,001
1996	349	37.2%	541	57.7%	10	1.1%	37	3.9%	937
1997	321	33.6%	584	61.2%	18	1.9%	31	3.2%	954
1998	322	37.7%	469	55.0%	16	1.9%	46	5.4%	853
1999	294	36.8%	455	56.9%	14	1.8%	36	4.5%	799
2000	311	32.9%	587	62.1%	12	1.3%	36	3.8%	946
2001	345	36.8%	543	58.0%	13	1.4%	36	3.8%	937
2002	250	33.5%	462	61.9%	12	1.6%	22	2.9%	746
2003	330	36.5%	548	60.6%	1	0.1%	26	2.9%	905
2004	323	33.8%	604	63.1%	5	0.5%	25	2.6%	957
2005	399	35.4%	693	61.5%	10	0.9%	25	2.2%	1,127
2006	372	36.6%	610	60.0%	7	0.7%	27	2.7%	1,016
2007	367	34.2%	649	60.5%	11	1.0%	45	4.2%	1,072
2008	389	36.0%	657	60.8%	6	0.6%	28	2.6%	1,080
2009	375	39.1%	552	57.6%	12	1.3%	20	2.1%	959
2010	427	36.6%	711	60.9%	10	0.9%	20	1.7%	1,168
	10,803	**35.1%**	**18,455**	**59.9%**	**443**	**1.4%**	**1,093**	**3.5%**	**30,794**

Notes: 1) Transfer survey information is not included for 342 permit foreclosures. However, 334 subsequent transfers of these permits are included in the "other" category.

2) Surveys for 1981 include one transfer for the Yakutat Salmon Setnet permit type where the relationship was not indicated.

3) Transfer of permits as an inheritance is included in the gift category.

Table 9.
Percent of Transfers That Were Gifts*

Permit	Percent
Lower Yukon Herring Gillnet	89.1%
Goodnews Bay Herring Gillnet	81.5%
Nunivak Island Herring Gillnet	81.3%
Nelson Island Herring Gillnet	80.3%
Bristol Bay Herring Spawn on Kelp	73.3%
Kuskokwim Salmon Gillnet	72.9%
Lower Yukon Salmon Gillnet	66.0%
Kotzebue Salmon Gillnet	63.2%
Kodiak Salmon Setnet	61.1%
Norton Sound Salmon Gillnet	54.3%
Yakutat Salmon Setnet	50.4%
Upper Yukon Salmon Fish Wheel	50.2%
Upper Yukon Salmon Gillnet	50.0%

** With at least 5 transfers for inclusion in ranking*

In earlier years, fisheries with lower permit values tended to have higher proportions of gift transactions. This generality no longer appears to be true and could be due to the overall fall of permit prices. A notable exception was the salmon hand troll fishery (low percentage of gifts and a low permit value; Tables 5-3 and 5-5, principal report).

Acquisition Methods by Residency

Table 10 shows a breakout of acquisition methods by the resident type of the transfer recipient. Since 1980, 49.3% of the transferred permits obtained by Alaska Rural Locals have come as gifts. Sales have accounted for the majority of the transfers to each of the other resident types.

Table 10.
Permit Acquisition Methods by Residency, 1980 – 2010

Residency	Gift	Sale	Trade	Other
Alaska Rural Local	49.3%	45.5%	1.4 %	3.9 %
Alaska Rural Nonlocal	28.4%	66.0 %	1.3 %	4.3 %
Alaska Urban Local	27.9 %	66.9 %	1.9 %	3.2 %
Alaska Urban Nonlocal	28.7 %	65.6 %	1.3 %	4.4 %
Nonresident	29.5 %	66.4 %	1.1 %	3.0 %

Financing of Permit Purchases

The transfer survey indicates that the predominant means of financing for permit purchases has been through self-financing, which was used for 66.8% of all purchases surveyed from 1980 through 2010 (Table 11). The next most important source of financing has been the Department of Commerce, Community, and Economic Development's (DCCED) loan program, which assisted in 15.0% of the purchases.[8] The remainder of the financing sources come from transferors, banks and other private lending institutions, the Commercial Fishing and Agriculture Bank, and fish processors.

The percentage of self-financed purchases has tended to increase over time, more than doubling since 1980; there has been a significant increase since 2001, perhaps related to decreasing permit values. This contrasts with the percentage of purchases financed by DCCED loans, which have generally declined somewhat since the mid-1980s.

Both the percentage and the number of permit sales financed by the transferor have declined significantly since 1980 (Table 11). In 1980, 142 transfers were financed by the seller (27.7%); however, in the 14 years since 1996 only 16 transfers have been seller-financed.

Fishery-specific tables in the main report indicate that many individual fisheries substantially deviate from the statewide percentages. For example, many fisheries in which the percentages of self-financed permits are higher than the statewide percentage tend to be those with lower permit values, especially the Southern Southeast Herring Spawn on Kelp Pound (92.3%), The Bristol Bay Herring Spawn on Kelp (91.7%), the Southeast Urchin Dive (91.3%), and the Salmon Hand Troll (89.7%) fisheries. Notable exceptions (relatively high permit value with higher rate of self-finance) include the Northern Southeast Herring Spawn on Kelp fishery (88.7%) and the Kodiak Tanner crab fishery (91.4% for under 60 foot vessel and 83.3% for the to 120 foot vessel permits).

TABLE 11.
Sources of Permit Financing, All Fisheries by Year (from 1980-2010 survey data)*

Year	Self/Other		Bank		DCCED		CFAB		Transferor		Processor		Combination		Total
1980	209	40.7%	61	11.9%	92	17.9%	1	0.2%	142	27.7%	8	1.6%	0	0.0%	513
1981	268	41.4%	69	10.7%	159	24.6%	11	1.7%	138	21.3%	2	0.3%	0	0.0%	647
1982	282	41.2%	66	9.6%	181	26.4%	2	0.3%	150	21.9%	4	0.6%	0	0.0%	685
1983	331	46.7%	69	9.7%	167	23.6%	16	2.3%	122	17.2%	4	0.6%	0	0.0%	709
1984	339	54.9%	59	9.5%	138	22.3%	5	0.8%	74	12.0%	3	0.5%	0	0.0%	618
1985	401	57.0%	61	8.7%	161	22.9%	2	0.3%	67	9.5%	8	1.1%	3	0.4%	703
1986	460	59.7%	48	6.2%	170	22.0%	12	1.6%	61	7.9%	10	1.3%	10	1.3%	771
1987	446	61.8%	44	6.1%	132	18.3%	22	3.0%	64	8.9%	9	1.2%	5	0.7%	722
1988	450	63.2%	59	8.3%	115	16.2%	22	3.1%	48	6.7%	8	1.1%	10	1.4%	712
1989	294	57.1%	38	7.4%	88	17.1%	22	4.3%	46	8.9%	11	2.1%	16	3.1%	515
1990	349	62.9%	27	4.9%	87	15.7%	35	6.3%	36	6.5%	10	1.8%	11	2.0%	555
1991	357	65.1%	28	5.1%	78	14.2%	32	5.8%	40	7.3%	8	1.5%	5	0.9%	548
1992	368	68.3%	37	6.9%	59	10.9%	24	4.5%	29	5.4%	14	2.6%	8	1.5%	539
1993	263	59.0%	20	4.5%	86	19.3%	12	2.7%	45	10.1%	10	2.2%	10	2.2%	446
1994	332	66.4%	35	7.0%	66	13.2%	9	1.8%	40	8.0%	12	2.4%	6	1.2%	500
1995	389	64.1%	47	7.7%	91	15.0%	18	3.0%	12	2.0%	13	2.1%	37	6.1%	607
1996	361	66.7%	32	5.9%	86	15.9%	12	2.2%	2	0.4%	12	2.2%	36	6.7%	541
1997	379	64.9%	40	6.8%	96	16.4%	12	2.1%	4	0.7%	6	1.0%	47	8.0%	584
1998	315	67.2%	27	5.8%	82	17.5%	11	2.3%	0	0.0%	6	1.3%	28	6.0%	469
1999	323	71.0%	29	6.4%	57	12.5%	7	1.5%	1	0.2%	7	1.5%	31	6.8%	455
2000	409	69.7%	25	4.3%	82	14.0%	22	3.7%	2	0.3%	6	1.0%	41	7.0%	587
2001	418	77.0%	15	2.8%	53	9.8%	14	2.6%	1	0.2%	5	0.9%	37	6.8%	543
2002	380	82.3%	12	2.6%	39	8.4%	6	1.3%	3	0.6%	0	0.0%	22	4.8%	462
2003	453	82.7%	23	4.2%	36	6.6%	13	2.4%	1	0.2%	1	0.2%	21	3.8%	548
2004	500	82.8%	19	3.1%	40	6.6%	14	2.3%	0	0.0%	7	1.2%	24	4.0%	604
2005	586	84.6%	13	1.9%	49	7.1%	16	2.3%	1	0.1%	1	0.1%	27	3.9%	693
2006	496	81.3%	21	3.4%	63	10.3%	18	3.0%	1	0.2%	0	0.0%	11	1.8%	610
2007	534	82.3%	15	2.3%	49	7.6%	17	2.6%	0	0.0%	5	0.8%	29	4.5%	649
2008	567	86.3%	13	2.0%	47	7.2%	17	2.6%	0	0.0%	3	0.5%	10	1.5%	657
2009	458	83.0%	4	0.7%	52	9.4%	19	3.4%	2	0.4%	1	0.2%	16	2.9%	552
2010	606	85.2%	5	0.7%	63	8.9%	19	2.7%	0	0.0%	5	0.7%	13	1.8%	711
All Years	**12,323**	**66.8%**	**1,061**	**5.7%**	**2,764**	**15.0%**	**462**	**2.5%**	**1,132**	**6.1%**	**199**	**1.1%**	**514**	**2.8%**	**18,455**

** This table only includes the transfers where the survey respondents indicated the permit changed hands through a sales transaction.*
DCCED – Department of Commerce, Community, and Economic Development
CFAB – Commercial Fishing and Agriculture Bank

State-financed loans were a significant means of financing in several the Southeast King/Tanner fisheries. Other fisheries that have shown a high use of state financing include: Prince William Sound Roe Herring (34.5%), Cook Inlet Salmon Seine (32.7%), and the Southeast Roe Herring Seine (32.2%).

Permit Financing by Resident Type

Table 12 provides information from survey responses on the sources of permit financing by resident type over the entire 1980 to 2010 time period. Alaska residents have been the recipients of 12,596 surveyed permit purchases since 1980 and most commonly used either their personal resources or authorized loans from the State of Alaska as a means of financing. Urban Alaska residents have received about half (1,440 of 2,764) of the state loans. Nonresidents have the highest rates of self-financing (78.6%) and of financing through the transferor (8.6%).

TABLE 12.
Sources of Permit Financing By Resident Type of Transfer Recipient (from 1980-2010 survey data)*

Resident Type	Self/Other		Bank		DCCED		CFAB		Transferor		Processor		Combination		Total
Alaska Rural Local	2,617	60.5%	243	5.6%	890	20.6%	160	3.7%	220	5.1%	51	1.2%	142	3.3%	4,323
Alaska Rural Non-Local	736	54.6%	50	3.7%	411	30.5%	55	4.1%	59	4.4%	9	0.7%	27	2.0%	1,347
Alaska Urban Local	3,101	65.4%	249	5.3%	882	18.6%	137	2.9%	228	4.8%	41	0.9%	103	2.2%	4,741
Alaska Urban Non-Local	1,262	57.8%	84	3.8%	558	25.5%	102	4.7%	120	5.5%	6	0.3%	53	2.4%	2,185
Nonresident	4,607	78.6%	435	7.4%	23	0.4%	8	0.1%	505	8.6%	92	1.6%	189	3.2%	5,859
Overall Totals	**12,323**	**66.8%**	**1,061**	**5.7%**	**2,764**	**15.0%**	**462**	**2.5%**	**1,132**	**6.1%**	**199**	**1.1%**	**514**	**2.8%**	**18,455**

** This table only includes the transfers where the survey respondents indicated the permit changed hands through a sales transaction.*

Permit Prices

Table 13 shows mean and median permit prices by permit type and year for sales that occurred over the 1980 to 2010 period. If the surveys indicated a permit price of less than $500, they were excluded from the calculations[9]. Due to reasons of confidentiality, permit value statistics are not shown if there were less than four sales transactions for a permit type in a year. Also, no value is reported for a permit type if there were no sales transactions in a year. All the prices are in nominal dollars and do not reflect adjustments for general price inflation.

The most complete information over the longest period of time is for permit prices in the salmon fisheries. Prices in these fisheries tended to increase until around 1990, and then fell from 1991 to 2003, but increased from 2004 through 2010. Most of the permits in the herring fisheries show their highest values from 1989 to 1991.

Table 13. Mean and Median Permit Prices From Survey Data, by Permit Type and Year

Permit Type	Year	Number of Sales	Mean Value	Median Value
Salmon Power Troll	1980	72	$33,308	$35,000
	1981	68	$29,012	$30,000
	1982	71	$21,630	$21,500
	1983	73	$20,864	$20,000
	1984	71	$19,456	$20,000
	1985	73	$21,509	$22,000
	1986	72	$24,776	$25,000
	1987	65	$26,431	$27,000
	1988	68	$29,782	$30,000
	1989	56	$32,446	$33,000
	1990	51	$33,142	$34,000
	1991	56	$36,299	$38,000
	1992	45	$33,872	$35,000
	1993	47	$30,747	$31,000
	1994	44	$28,268	$29,000
	1995	71	$28,323	$28,000
	1996	35	$19,800	$18,500
	1997	54	$18,104	$18,000
	1998	44	$17,558	$18,000
	1999	39	$15,050	$15,000
	2000	74	$14,617	$15,000
	2001	63	$13,009	$13,000
	2002	37	$13,951	$14,500
	2003	56	$12,548	$13,000
	2004	80	$16,403	$14,000
	2005	53	$26,792	$28,000
	2006	78	$31,735	$31,000
	2007	46	$35,848	$36,000
	2008	51	$35,182	$35,000
	2009	33	$33,910	$35,000
	2010	50	$28,570	$29,500
Salmon Hand Troll	1982	32	$4,036	$4,250
	1983	84	$4,964	$5,000
	1984	68	$4,732	$5,000
	1985	89	$5,109	$5,000
	1986	108	$5,252	$5,300
	1987	93	$5,551	$5,500
	1988	96	$6,451	$6,500
	1989	66	$7,323	$7,500
	1990	98	$8,322	$8,000
	1991	82	$8,334	$8,500
	1992	70	$8,477	$8,500
	1993	53	$8,853	$7,500
	1994	63	$7,362	$7,500
	1995	79	$7,415	$7,500
	1996	42	$5,868	$5,850
	1997	59	$5,579	$5,500
	1998	48	$4,651	$5,000
	1999	62	$3,894	$4,000
	2000	65	$4,102	$4,000
	2001	61	$4,057	$4,000
	2002	40	$3,574	$3,750
	2003	64	$3,453	$3,500
	2004	65	$4,075	$3,800
	2005	77	$6,971	$7,500
	2006	78	$8,533	$8,500
	2007	77	$9,255	$9,500
	2008	60	$9,734	$10,000
	2009	57	$10,538	$10,500
	2010	48	$9,858	$10,000
SE Salmon Seine	1980	15	$39,600	$40,000
	1981	23	$40,652	$40,000
	1982	21	$40,286	$40,000
	1983	20	$38,531	$40,000
	1984	38	$40,884	$40,000
	1985	27	$37,907	$38,000
	1986	18	$34,403	$36,000
	1987	30	$40,832	$40,000
SE Salmon Seine (cont.)	1988	18	$65,833	$67,500
	1989	29	$78,448	$75,000
	1990	18	$104,667	$105,000
	1991	19	$92,684	$90,000
	1992	16	$64,969	$60,000
	1993	16	$79,625	$81,000
	1994	25	$73,616	$72,000
	1995	17	$70,912	$75,000
	1996	16	$61,188	$62,500
	1997	20	$50,033	$50,000
	1998	24	$49,479	$47,000
	1999	17	$40,421	$42,000
	2000	24	$38,517	$40,000
	2001	22	$34,700	$34,000
	2002	25	$22,800	$21,000
	2003	8	$32,750	$31,500
	2004	6	$32,083	$32,750
	2005	17	$41,827	$41,000
	2006	18	$50,889	$52,500
	2007	17	$62,382	$60,000
	2008	9	$67,833	$69,500
	2009	17	$72,824	$73,000
	2010	25	$87,360	$78,000
SE Salmon Drift Gillnet	1980	35	$41,714	$43,000
	1981	40	$43,920	$45,000
	1982	41	$38,495	$38,000
	1983	37	$34,508	$35,000
	1984	43	$32,898	$33,000
	1985	43	$35,623	$36,500
	1986	45	$44,849	$45,000
	1987	34	$55,632	$56,750
	1988	30	$75,958	$70,500
	1989	16	$125,625	$131,000
	1990	28	$106,500	$105,000
	1991	33	$82,773	$85,000
	1992	29	$71,276	$76,000
	1993	27	$80,519	$80,000
	1994	31	$62,929	$61,500
	1995	33	$70,803	$70,000
	1996	30	$59,417	$60,000
	1997	32	$50,625	$52,000
	1998	25	$35,425	$35,000
	1999	30	$34,240	$35,000
	2000	38	$33,029	$33,000
	2001	28	$41,314	$43,000
	2002	14	$27,000	$27,500
	2003	18	$21,056	$21,000
	2004	24	$21,475	$20,750
	2005	36	$29,778	$29,500
	2006	40	$38,936	$38,000
	2007	29	$54,276	$55,000
	2008	21	$54,399	$53,500
	2009	22	$53,091	$53,000
	2010	40	$57,400	$53,000
SE Roe Herring Seine	1982	2	**	**
	1983	2	**	**
	1984	1	**	**
	1985	2	**	**
	1986	2	**	**
	1987	2	**	**
	1988	3	**	**
	1990	2	**	**
	1991	4	$235,000	$230,000
	1993	1	**	**
	1994	1	**	**
	1995	3	**	**
	1996	5	$287,300	$300,000
	1997	4	$227,500	$225,000

Table 13. Mean and Median Permit Prices From Survey Data, by Permit Type and Year

Permit Type	Year	Number of Sales	Mean Value	Median Value
SE Roe Herring Seine (cont.)	1998	2	**	**
	1999	1	**	**
	2000	3	**	**
	2001	2	**	**
	2002	2	**	**
	2003	1	**	**
	2004	4	$297,000	$300,000
	2005	1	**	**
	2006	2	**	**
	2007	2	**	**
	2008	2	**	**
	2010	3	**	**
SE Herring Gillnet	1980	4	$13,363	$14,225
	1981	4	$13,875	$14,000
	1982	5	$27,500	$25,000
	1983	3	**	**
	1984	6	$39,583	$38,750
	1985	12	$45,000	$46,500
	1986	4	$51,250	$51,000
	1987	12	$48,542	$51,250
	1988	11	$48,827	$50,000
	1989	4	$54,750	$56,000
	1990	2	**	**
	1991	7	$27,214	$27,000
	1992	12	$32,388	$35,000
	1993	1	**	**
	1994	8	$31,813	$32,500
	1995	10	$31,800	$31,250
	1996	13	$34,923	$35,000
	1997	5	$35,100	$36,500
	1998	6	$26,417	$27,500
	1999	5	$18,200	$18,000
	2000	3	**	**
	2001	3	**	**
	2002	2	**	**
	2003	14	$9,734	$10,000
	2004	5	$14,320	$15,000
	2005	6	$10,167	$10,500
	2006	3	**	**
	2007	3	**	**
	2008	11	$8,614	$8,000
	2009	11	$13,800	$15,000
	2010	6	$15,750	$15,250
NSE Herring Spawn on Kelp Pound	1998	3	**	**
	1999	6	$16,583	$16,000
	2000	4	$18,500	$19,500
	2001	26	$15,281	$16,500
	2002	14	$21,571	$20,000
	2003	15	$38,167	$35,000
	2004	8	$45,750	$47,000
	2005	9	$48,667	$48,000
	2006	6	$38,333	$39,000
	2007	15	$36,120	$35,000
	2008	12	$49,000	$50,000
	2009	15	$58,667	$60,000
	2010	7	$60,714	$62,000
SSE Herring Spawn on Kelp Pound	1999	2	**	**
	2000	1	**	**
	2001	13	$3,600	$3,500
	2002	20	$4,273	$4,750
	2003	16	$6,781	$6,000
	2004	13	$14,038	$15,000
	2005	4	$9,125	$9,500
	2006	3	**	**
	2007	7	$8,643	$9,500
	2008	17	$13,029	$10,000
SSE Herring Spawn on Kelp Pound (cont.)	2009	13	$17,308	$18,000
	2010	8	$15,313	$17,000
NSEI Sablefish Longline	1989	1	**	**
	1990	2	**	**
	1991	3	**	**
	1992	4	$149,000	$149,000
	1993	2	**	**
	1994	2	**	**
	1995	6	$190,000	$195,000
	1996	2	**	**
	1997	2	**	**
	1998	1	**	**
	1999	3	**	**
	2000	5	$248,000	$250,000
	2002	2	**	**
	2003	2	**	**
	2005	1	**	**
	2006	2	**	**
	2007	1	**	**
	2008	5	$300,500	$310,000
	2009	3	**	**
	2010	5	$284,800	$285,000
SSEI Sablefish Longline	1990	1	**	**
	1991	1	**	**
	1992	1	**	**
	1993	1	**	**
	1996	1	**	**
	1998	1	**	**
	2001	1	**	**
	2005	1	**	**
	2006	1	**	**
	2007	3	**	**
	2008	1	**	**
	2009	1	**	**
	2010	2	**	**
SSEI Sablefish Pots	1997	1	**	**
SE Red, Blue King Crab Pot	2001	1	**	**
	2002	1	**	**
	2006	2	**	**
	2009	1	**	**
	2010	2	**	**
SE Red, Blue, Brown King Crab Pot	2001	1	**	**
	2003	1	**	**
	2005	1	**	**
	2010	2	**	**
SE Brown King Crab Pot	1997	1	**	**
	2002	1	**	**
	2003	1	**	**
	2005	1	**	**
	2008	2	**	**
SE Red, Blue King/Tanner Pot	1990	1	**	**
	1991	1	**	**
	1994	3	**	**
	1999	1	**	**
	2000	2	**	**
	2001	1	**	**
	2004	1	**	**
	2008	1	**	**
	2010	3	**	**
SE Brown King/Tanner Pot	2000	1	**	**
	2004	1	**	**
	2008	1	**	**
	2009	1	**	**

Table 13. Mean and Median Permit Prices From Survey Data, by Permit Type and Year

Permit Type	Year	Number of Sales	Mean Value	Median Value
SE All King/Tanner Pot	1990	1	**	**
	1991	1	**	**
	1992	1	**	**
	1994	2	**	**
	1995	2	**	**
	1998	1	**	**
	2001	1	**	**
	2002	3	**	**
	2005	3	**	**
	2006	1	**	**
	2007	1	**	**
	2008	1	**	**
	2009	1	**	**
SE Tanner Crab Pot	1990	1	**	**
	1993	1	**	**
	1996	1	**	**
	2000	1	**	**
	2001	2	**	**
	2002	2	**	**
	2003	2	**	**
	2004	1	**	**
	2007	2	**	**
	2008	1	**	**
	2009	1	**	**
	2010	2	**	**
SE Dungeness 300 Pot	1997	14	$87,036	$90,000
	1998	5	$70,800	$82,500
	1999	2	**	**
	2000	7	$54,571	$55,000
	2001	3	**	**
	2002	2	**	**
	2003	3	**	**
	2004	6	$50,425	$56,250
	2005	1	**	**
	2006	2	**	**
	2007	9	$57,833	$60,000
	2008	3	**	**
	2009	1	**	**
	2010	1	**	**
SE Dungeness 225 Pot	1997	11	$65,133	$67,000
	1998	5	$57,750	$60,000
	1999	2	**	**
	2000	3	**	**
	2001	3	**	**
	2002	4	$40,625	$41,000
	2003	2	**	**
	2004	8	$44,594	$45,000
	2005	3	**	**
	2006	3	**	**
	2007	3	**	**
	2008	8	$43,313	$45,000
	2009	3	**	**
	2010	4	$40,750	$40,500
SE Dungeness 150 Pot	1997	28	$41,736	$41,625
	1998	15	$40,140	$40,000
	1999	2	**	**
	2000	5	$22,000	$20,000
	2001	9	$21,817	$22,500
	2002	15	$26,540	$26,000
	2003	10	$30,800	$30,000
	2004	10	$30,410	$30,000
	2005	7	$28,857	$30,000
	2006	2	**	**
	2007	5	$28,610	$28,500
	2008	16	$31,344	$30,000
	2009	6	$31,083	$31,000
	2010	8	$25,225	$25,000
SE Dungeness 75 Pot	1997	24	$21,740	$21,000
	1998	22	$21,786	$22,000
	1999	9	$16,194	$15,000
	2000	9	$14,605	$14,000
	2001	10	$11,760	$12,000
	2002	11	$13,709	$14,000
	2003	11	$13,845	$14,000
	2004	10	$13,900	$13,500
	2005	9	$14,572	$14,500
	2006	9	$12,994	$14,000
	2007	15	$13,400	$13,500
	2008	10	$14,450	$14,500
	2009	8	$15,375	$15,750
	2010	7	$12,571	$13,500
SE Shrimp Beam Trawl	1999	1	**	**
	2001	4	$43,750	$45,000
	2002	2	**	**
	2003	1	**	**
	2007	1	**	**
	2008	2	**	**
	2010	3	**	**
SE Shrimp Pot	1998	5	$21,300	$23,500
	1999	11	$15,409	$15,000
	2000	25	$11,500	$11,000
	2001	16	$23,125	$24,500
	2002	10	$14,350	$14,750
	2003	12	$15,397	$14,000
	2004	12	$16,958	$18,000
	2005	9	$20,444	$21,000
	2006	5	$22,000	$22,000
	2007	7	$19,571	$20,000
	2008	9	$16,456	$16,000
	2009	6	$12,500	$12,500
	2010	11	$14,864	$15,000
SE Urchin Dive	2000	9	$5,439	$4,800
	2001	22	$7,798	$8,000
	2002	11	$9,436	$10,000
	2003	9	$7,750	$8,000
	2004	15	$6,634	$6,300
	2005	2	**	**
	2006	3	**	**
	2007	4	$3,875	$4,000
	2008	2	**	**
	2009	1	**	**
	2010	2	**	**
SE Geoduck Dive	2001	5	$26,200	$25,000
	2002	4	$22,825	$23,500
	2003	5	$29,200	$30,000
	2004	9	$31,333	$31,000
	2005	6	$42,167	$39,500
	2006	3	**	**
	2007	3	**	**
	2008	1	**	**
	2009	3	**	**
	2010	8	$81,625	$80,000
SE Cucumber Dive	2001	17	$14,603	$15,000
	2002	8	$10,625	$10,000
	2003	10	$8,360	$8,250
	2004	10	$8,230	$8,000
	2005	10	$8,860	$8,800
	2006	12	$8,858	$8,500
	2007	18	$8,461	$9,000
	2008	9	$10,772	$10,000
	2009	12	$10,765	$11,000
	2010	18	$11,121	$11,000

Table 13. Mean and Median Permit Prices From Survey Data, by Permit Type and Year

Permit Type	Year	Number of Sales	Mean Value	Median Value
Yakutat Salmon Setnet	1980	2	**	**
	1981	11	$26,682	$27,000
	1982	8	$32,792	$33,667
	1983	4	$27,250	$31,000
	1984	4	$23,750	$23,500
	1985	9	$25,862	$27,000
	1986	7	$26,857	$25,000
	1987	5	$27,200	$28,000
	1988	17	$28,279	$30,000
	1989	5	$33,200	$30,000
	1990	12	$36,458	$39,000
	1991	8	$44,125	$47,500
	1992	3	**	**
	1993	10	$46,850	$49,000
	1994	5	$36,500	$40,000
	1995	5	$49,600	$50,000
	1996	8	$43,375	$42,500
	1997	5	$34,900	$35,000
	1998	2	**	**
	1999	2	**	**
	2000	3	**	**
	2001	5	$23,900	$26,900
	2002	2	**	**
	2003	7	$9,571	$8,000
	2004	13	$12,685	$10,000
	2005	10	$14,050	$12,750
	2006	6	$14,250	$13,750
	2007	9	$16,589	$16,500
	2008	10	$20,260	$20,000
	2009	6	$21,254	$20,013
	2010	5	$17,380	$17,000
PWS Salmon Seine	1980	14	$40,154	$40,000
	1981	16	$69,531	$70,000
	1982	14	$101,690	$100,000
	1983	17	$142,384	$155,000
	1984	11	$131,695	$135,000
	1985	16	$104,469	$105,000
	1986	13	$99,400	$108,000
	1987	21	$90,000	$87,000
	1988	19	$135,158	$140,000
	1989	6	$236,333	$232,500
	1990	5	$228,000	$250,000
	1991	10	$215,500	$212,500
	1992	19	$98,347	$100,000
	1993	10	$88,850	$97,500
	1994	17	$35,265	$33,000
	1995	8	$75,000	$68,250
	1996	6	$33,833	$31,500
	1997	17	$36,382	$35,000
	1998	11	$34,591	$38,000
	1999	10	$23,050	$24,000
	2000	19	$22,474	$22,000
	2001	11	$21,591	$22,000
	2002	9	$20,914	$20,000
	2003	3	**	**
	2004	6	$14,000	$14,000
	2005	12	$18,467	$19,000
	2006	12	$26,090	$25,000
	2007	17	$29,588	$30,000
	2008	40	$68,840	$70,000
	2009	8	$69,000	$70,000
	2010	21	$99,300	$88,750
PWS Salmon Drift Gillnet	1980	26	$27,288	$25,250
	1981	54	$32,204	$33,500
	1982	51	$46,461	$46,000
	1983	37	$61,450	$65,000
	1984	35	$53,157	$52,500
PWS Salmon Drift Gillnet (cont.)	1985	53	$55,679	$56,000
	1986	46	$62,006	$60,000
	1987	45	$62,147	$63,000
	1988	50	$75,802	$75,000
	1989	15	$137,833	$150,000
	1990	27	$160,523	$165,000
	1991	24	$122,250	$139,000
	1992	26	$95,212	$92,750
	1993	14	$99,286	$98,250
	1994	21	$67,155	$65,000
	1995	34	$67,397	$65,000
	1996	30	$57,360	$60,000
	1997	23	$67,861	$70,000
	1998	29	$69,048	$72,000
	1999	24	$55,213	$52,500
	2000	27	$58,817	$60,000
	2001	19	$57,484	$56,500
	2002	18	$41,972	$42,000
	2003	21	$35,886	$35,000
	2004	27	$40,417	$40,000
	2005	25	$46,812	$48,000
	2006	28	$51,625	$52,000
	2007	27	$52,679	$52,000
	2008	35	$86,920	$90,000
	2009	26	$108,588	$111,600
	2010	46	$126,188	$119,530
PWS Salmon Setnet	1981	2	**	**
	1982	5	$19,400	$20,000
	1983	6	$24,167	$25,000
	1984	4	$31,250	$30,000
	1985	4	$32,375	$32,750
	1986	1	**	**
	1987	4	$29,625	$28,250
	1988	2	**	**
	1989	1	**	**
	1990	1	**	**
	1991	1	**	**
	1992	1	**	**
	1994	2	**	**
	1995	3	**	**
	1996	2	**	**
	1997	1	**	**
	1998	2	**	**
	2000	4	$60,450	$60,000
	2001	2	**	**
	2002	3	**	**
	2003	1	**	**
	2004	3	**	**
	2005	2	**	**
	2006	1	**	**
	2008	1	**	**
	2009	1	**	**
	2010	3	**	**
PWS Roe Herring Seine	1980	4	$46,250	$46,250
	1981	2	**	**
	1982	7	$71,250	$80,000
	1983	1	**	**
	1984	7	$63,857	$60,000
	1985	12	$66,375	$65,000
	1986	10	$75,750	$75,000
	1987	4	$96,250	$95,000
	1988	10	$160,500	$165,000
	1989	1	**	**
	1990	3	**	**
	1991	6	$222,500	$230,000
	1992	8	$187,531	$190,000
	1993	1	**	**
	1994	2	**	**

Table 13. Mean and Median Permit Prices From Survey Data, by Permit Type and Year

Permit Type	Year	Number of Sales	Mean Value	Median Value
PWS Roe Herring Seine (cont.)	1995	4	$59,182	$65,000
	1996	8	$71,875	$74,000
	1997	6	$125,333	$135,000
	1999	2	**	**
	2000	4	$34,000	$36,500
	2001	1	**	**
	2002	2	**	**
	2003	2	**	**
	2004	1	**	**
	2007	2	**	**
	2008	1	**	**
	2009	1	**	**
	2010	5	$16,400	$10,000
PWS Roe Herring Gillnet	1982	3	**	**
	1983	4	$17,000	$19,000
	1984	4	$24,000	$25,000
	1985	3	**	**
	1986	4	$30,500	$30,000
	1988	2	**	**
	1989	3	**	**
	1991	2	**	**
	1992	1	**	**
	1993	2	**	**
	1995	2	**	**
	1997	3	**	**
PWS Her Spawn on Kelp Pound	1988	32	$24,519	$20,000
	1989	13	$47,884	$50,000
	1990	2	**	**
	1991	12	$61,375	$62,250
	1992	6	$57,833	$57,750
	1993	8	$40,675	$40,200
	1994	5	$28,800	$28,000
	1995	2	**	**
	1996	19	$23,664	$21,000
	1997	7	$31,571	$33,000
	2000	1	**	**
	2006	2	**	**
	2009	1	**	**
	2010	2	**	**
PWS Sablefish Fixed 90ft	2003	1	**	**
PWS Sablefish Fixed 60ft	2001	1	**	**
	2004	1	**	**
	2007	1	**	**
	2008	1	**	**
PWS Sablefish Fixed 50ft	1998	1	**	**
	1999	1	**	**
	2000	2	**	**
	2001	3	**	**
	2002	3	**	**
	2003	2	**	**
	2004	5	$36,600	$35,000
	2005	6	$31,833	$32,000
	2006	2	**	**
	2007	4	$33,125	$33,750
	2008	1	**	**
	2009	1	**	**
	2010	1	**	**
PWS Sablefish Fixed 35ft	1999	1	**	**
	2000	3	**	**
	2001	3	**	**
	2002	1	**	**
	2003	3	**	**
	2004	1	**	**
	2005	1	**	**
	2008	1	**	**
	2009	1	**	**

Permit Type	Year	Number of Sales	Mean Value	Median Value
Cook Inlet Salmon Seine	1980	7	$82,786	$80,000
	1981	7	$83,714	$85,000
	1982	5	$84,267	$85,000
	1983	8	$90,000	$90,000
	1984	1	**	**
	1985	4	$58,375	$58,500
	1986	5	$60,000	$60,000
	1987	11	$60,455	$60,000
	1988	9	$66,089	$65,000
	1989	3	**	**
	1990	4	$177,500	$180,000
	1991	2	**	**
	1992	1	**	**
	1995	1	**	**
	1996	4	$37,355	$32,210
	1997	2	**	**
	1998	2	**	**
	1999	2	**	**
	2000	1	**	**
	2002	2	**	**
	2003	1	**	**
	2004	3	**	**
	2005	7	$11,714	$12,000
	2006	1	**	**
	2007	4	$14,125	$14,250
	2008	5	$15,300	$16,000
	2009	3	**	**
	2010	1	**	**
Cook Inlet Salmon Drift	1980	34	$67,290	$67,500
	1981	48	$67,213	$70,000
	1982	37	$57,866	$60,000
	1983	51	$69,720	$71,000
	1984	35	$66,306	$70,000
	1985	39	$62,759	$63,000
	1986	50	$63,902	$65,000
	1987	26	$86,542	$85,000
	1988	28	$126,138	$135,000
	1989	35	$168,400	$180,000
	1990	24	$203,063	$202,500
	1991	28	$177,214	$182,500
	1992	32	$88,816	$90,000
	1993	21	$89,786	$91,000
	1994	25	$64,993	$65,000
	1995	32	$84,186	$79,475
	1996	30	$75,957	$75,500
	1997	34	$75,074	$79,750
	1998	26	$41,515	$45,000
	1999	23	$26,009	$25,000
	2000	29	$31,859	$32,000
	2001	16	$19,500	$22,000
	2002	13	$10,731	$10,000
	2003	22	$14,981	$14,925
	2004	45	$20,256	$20,000
	2005	28	$38,075	$38,750
	2006	23	$29,294	$28,000
	2007	24	$28,517	$28,950
	2008	24	$36,025	$35,500
	2009	23	$27,587	$28,000
	2010	37	$30,635	$27,500
Cook Inlet Salmon Setnet	1980	42	$15,333	$15,000
	1981	59	$15,322	$15,000
	1982	42	$17,190	$18,000
	1983	51	$18,340	$17,500
	1984	45	$17,078	$17,500
	1985	51	$16,312	$16,000
	1986	60	$18,310	$18,000
	1987	68	$26,727	$25,000

Table 13. Mean and Median Permit Prices From Survey Data, by Permit Type and Year

Permit Type	Year	Number of Sales	Mean Value	Median Value
Cook Inlet Salmon Setnet (cont.)	1988	46	$41,151	$50,000
	1989	49	$57,694	$60,000
	1990	42	$91,171	$100,000
	1991	20	$65,875	$69,500
	1992	25	$40,793	$40,000
	1993	33	$36,478	$35,000
	1994	19	$28,263	$23,500
	1995	23	$30,283	$30,000
	1996	16	$33,563	$28,000
	1997	31	$25,173	$25,000
	1998	19	$19,516	$18,000
	1999	25	$13,586	$13,000
	2000	18	$13,494	$12,000
	2001	18	$9,728	$10,000
	2002	12	$11,000	$8,500
	2003	12	$8,600	$8,375
	2004	27	$7,570	$7,500
	2005	42	$9,440	$10,000
	2006	25	$12,300	$12,500
	2007	32	$14,038	$15,000
	2008	39	$13,646	$14,000
	2009	20	$12,625	$13,250
	2010	26	$12,463	$12,000
Cook Inlet Herring Seine	1980	1	**	**
	1981	3	**	**
	1982	1	**	**
	1984	1	**	**
	1985	10	$16,700	$15,500
	1986	13	$31,362	$31,000
	1987	11	$111,364	$100,000
	1988	4	$165,000	$195,000
	1989	4	$211,250	$237,500
	1990	1	**	**
	1991	3	**	**
	1992	4	$80,625	$67,500
	1994	4	$67,000	$64,500
	1995	9	$74,645	$69,500
	1996	6	$104,750	$100,500
	1997	3	**	**
	1998	1	**	**
	1999	2	**	**
	2000	5	$24,400	$28,000
	2006	1	**	**
	2007	2	**	**
	2008	2	**	**
	2009	2	**	**
Cook Inlet Dungeness Pot	1997	1	**	**
	2003	1	**	**
	2008	7	$4,929	$5,000
	2009	2	**	**
Kodiak Salmon Seine	1980	24	$70,688	$75,000
	1981	20	$68,625	$75,000
	1982	29	$75,511	$80,000
	1983	28	$69,903	$73,250
	1984	17	$61,265	$60,000
	1985	23	$46,337	$43,000
	1986	27	$36,151	$36,000
	1987	38	$44,128	$45,000
	1988	34	$66,491	$65,000
	1989	22	$132,795	$135,000
	1990	17	$146,588	$150,000
	1991	15	$119,170	$120,000
	1992	20	$69,850	$70,000
	1993	17	$60,897	$61,000
	1994	25	$46,518	$42,500
	1995	24	$50,375	$50,000
	1996	12	$46,333	$46,500
Kodiak Salmon Seine (cont.)	1997	14	$39,786	$40,000
	1998	11	$33,043	$31,500
	1999	21	$29,119	$30,000
	2000	20	$20,355	$20,000
	2001	4	$19,250	$17,500
	2002	7	$9,929	$10,000
	2003	7	$8,601	$8,000
	2004	12	$10,192	$10,250
	2005	20	$14,345	$14,000
	2006	17	$17,988	$18,000
	2007	16	$20,000	$21,000
	2008	19	$23,684	$24,000
	2009	18	$24,906	$26,000
	2010	14	$30,036	$27,000
Kodiak Salmon Beach Seine	1980	4	$42,625	$45,000
	1981	7	$42,429	$45,000
	1982	2	**	**
	1983	3	**	**
	1984	2	**	**
	1985	4	$23,750	$25,000
	1986	2	**	**
	1987	5	$25,000	$23,000
	1988	5	$28,400	$30,000
	1989	6	$34,833	$34,000
	1990	3	**	**
	1991	2	**	**
	1992	1	**	**
	1994	2	**	**
	1995	1	**	**
	1996	2	**	**
	1999	1	**	**
	2005	1	**	**
	2006	1	**	**
	2007	1	**	**
	2008	1	**	**
	2009	1	**	**
Kodiak Salmon Setnet	1980	9	$39,861	$40,000
	1981	9	$41,278	$40,000
	1982	12	$39,817	$45,950
	1983	6	$57,033	$60,000
	1984	11	$57,200	$55,000
	1985	7	$56,357	$55,000
	1986	19	$61,792	$60,000
	1987	8	$60,122	$62,750
	1988	3	**	**
	1989	6	$69,542	$76,125
	1990	6	$85,000	$90,000
	1991	3	**	**
	1992	9	$109,722	$100,000
	1993	8	$111,938	$111,000
	1994	5	$98,040	$100,000
	1995	4	$92,625	$85,000
	1996	7	$75,961	$80,000
	1997	6	$107,500	$106,500
	1998	9	$86,994	$85,000
	1999	9	$91,667	$100,000
	2000	6	$107,792	$103,500
	2001	1	**	**
	2002	6	$55,667	$50,000
	2003	5	$35,600	$40,000
	2004	6	$42,917	$41,250
	2005	5	$36,260	$40,000
	2006	5	$45,400	$45,000
	2007	5	$60,100	$50,000
	2008	10	$58,700	$60,000
	2009	6	$63,658	$60,000
	2010	7	$71,200	$72,900

Table 13. Mean and Median Permit Prices From Survey Data, by Permit Type and Year

Permit Type	Year	Number of Sales	Mean Value	Median Value
Kodiak Roe Herring Seine	1985	4	$36,250	$35,000
	1986	7	$23,286	$25,000
	1987	9	$22,611	$23,000
	1988	2	**	**
	1989	3	**	**
	1990	5	$70,500	$62,500
	1991	3	**	**
	1992	10	$47,600	$50,000
	1993	3	**	**
	1994	10	$66,680	$67,750
	1995	6	$88,000	$87,500
	1996	4	$103,000	$102,000
	1997	2	**	**
	1998	1	**	**
	1999	2	**	**
	2000	1	**	**
	2002	1	**	**
	2003	1	**	**
	2004	3	**	**
	2005	2	**	**
	2006	1	**	**
	2007	1	**	**
	2008	2	**	**
	2009	7	$18,286	$19,000
	2010	4	$21,250	$23,000
Kodiak Roe Herring Gillnet	1984	1	**	**
	1985	10	$15,600	$15,000
	1986	10	$16,600	$16,000
	1987	6	$15,250	$15,500
	1988	18	$16,511	$16,000
	1989	12	$22,813	$25,000
	1990	8	$29,000	$30,500
	1991	8	$31,125	$31,000
	1992	7	$26,886	$28,000
	1993	4	$26,000	$28,000
	1994	7	$25,429	$25,000
	1995	10	$25,050	$25,000
	1996	16	$27,725	$27,750
	1997	6	$27,000	$28,250
	1998	1	**	**
	2002	1	**	**
	2003	1	**	**
	2004	1	**	**
	2005	4	$6,250	$6,000
	2006	1	**	**
	2007	1	**	**
	2008	3	**	**
	2009	2	**	**
	2010	5	$2,900	$3,000
Kodiak Food/Bait Herring Seine/Gill	2006	1	**	**
	2010	1	**	**
Kodiak Tanner Bairdi Pot 120ft	2005	1	**	**
	2006	2	**	**
	2007	1	**	**
	2010	2	**	**
Kodiak Tanner Bairdi Pot 60ft	2005	11	$33,591	$35,000
	2006	7	$33,714	$35,000
	2007	1	**	**
	2008	2	**	**
	2009	4	$23,500	$24,000
	2010	10	$27,100	$25,000
Chignik Salmon Seine	1981	3	**	**
	1982	2	**	**
	1983	2	**	**
	1984	4	$322,500	$320,000
	1985	3	**	**

Permit Type	Year	Number of Sales	Mean Value	Median Value
Chignik Salmon Seine (cont.)	1986	2	**	**
	1988	1	**	**
	1989	2	**	**
	1990	2	**	**
	1991	2	**	**
	1992	2	**	**
	1993	2	**	**
	1994	3	**	**
	1995	6	$228,333	$225,000
	1996	4	$194,500	$194,000
	1997	6	$188,333	$191,500
	1999	4	$158,750	$140,000
	2000	3	**	**
	2001	1	**	**
	2002	1	**	**
	2003	4	$179,500	$183,500
	2004	1	**	**
	2005	5	$159,600	$155,000
	2006	3	**	**
	2007	2	**	**
	2008	3	**	**
	2009	4	$70,750	$70,000
	2010	8	$78,375	$77,500
Pen/Aleutian Salmon Seine	1980	2	**	**
	1981	2	**	**
	1982	2	**	**
	1983	6	$195,000	$202,500
	1984	3	**	**
	1986	4	$251,250	$255,000
	1987	4	$145,000	$150,000
	1988	4	$149,625	$174,000
	1989	2	**	**
	1990	2	**	**
	1992	6	$191,717	$185,000
	1993	2	**	**
	1994	3	**	**
	1995	1	**	**
	1996	2	**	**
	1998	1	**	**
	1999	3	**	**
	2000	4	$48,750	$52,500
	2001	3	**	**
	2002	1	**	**
	2003	7	$17,143	$15,000
	2004	6	$15,167	$15,000
	2005	4	$17,500	$15,000
	2006	2	**	**
	2007	5	$32,580	$30,400
	2008	18	$53,878	$50,000
	2009	5	$84,000	$75,000
	2010	7	$62,857	$60,000
Pen/Aleutian Salmon Drift	1980	8	$95,875	$95,000
	1981	10	$123,500	$125,000
	1982	13	$119,000	$150,000
	1983	9	$145,778	$150,000
	1984	7	$186,429	$190,000
	1985	15	$159,153	$184,000
	1986	13	$197,000	$200,000
	1987	7	$215,429	$220,000
	1988	2	**	**
	1989	5	$344,000	$350,000
	1990	11	$356,136	$360,000
	1991	6	$357,000	$375,000
	1992	7	$319,286	$310,000
	1993	9	$389,932	$400,000
	1994	4	$329,750	$324,500
	1995	6	$305,167	$300,000
	1996	9	$287,222	$300,000

Table 13. Mean and Median Permit Prices From Survey Data, by Permit Type and Year

Permit Type	Year	Number of Sales	Mean Value	Median Value
Pen/Aleutian Salmon Drift (cont.)	1997	3	**	**
	1998	1	**	**
	1999	6	$154,433	$138,000
	2000	3	**	**
	2001	3	**	**
	2002	8	$26,125	$25,000
	2003	13	$23,062	$24,000
	2004	7	$28,000	$30,000
	2005	19	$47,392	$47,950
	2006	9	$68,333	$76,000
	2007	9	$74,726	$76,000
	2008	7	$92,143	$90,000
	2009	7	$98,000	$102,000
	2010	14	$107,929	$106,000
Pen/Aleutian Salmon Setnet	1980	5	$14,500	$10,000
	1981	9	$54,278	$35,000
	1982	11	$54,636	$50,000
	1983	11	$50,836	$60,000
	1984	9	$45,332	$50,000
	1985	7	$47,500	$52,000
	1986	7	$56,357	$57,000
	1987	9	$55,722	$60,000
	1988	3	**	**
	1989	1	**	**
	1990	3	**	**
	1991	3	**	**
	1992	7	$101,429	$95,000
	1993	9	$129,444	$125,000
	1994	3	**	**
	1995	11	$117,500	$110,000
	1996	3	**	**
	1997	10	$107,470	$95,000
	1998	4	$78,750	$77,500
	1999	2	**	**
	2000	5	$97,080	$87,000
	2001	3	**	**
	2002	4	$62,625	$71,500
	2003	4	$50,500	$48,500
	2004	4	$32,620	$31,741
	2005	9	$52,133	$50,000
	2006	5	$56,848	$57,600
	2007	2	**	**
	2008	5	$49,520	$45,000
	2009	1	**	**
	2010	6	$49,583	$48,750
Bristol Bay Salmon Drift	1980	78	$87,763	$100,000
	1981	89	$82,107	$85,000
	1982	112	$94,383	$100,000
	1983	98	$98,878	$100,000
	1984	88	$117,036	$122,500
	1985	89	$114,647	$122,000
	1986	97	$121,120	$127,000
	1987	78	$130,265	$130,000
	1988	77	$167,461	$170,000
	1989	53	$233,400	$256,125
	1990	60	$212,855	$216,500
	1991	61	$201,173	$217,500
	1992	68	$185,492	$184,500
	1993	68	$187,248	$203,500
	1994	79	$161,909	$160,000
	1995	87	$190,870	$190,000
	1996	66	$171,564	$170,000
	1997	66	$154,134	$164,000
	1998	70	$99,865	$96,250
	1999	51	$89,725	$90,000
	2000	68	$83,687	$84,625
	2001	79	$35,916	$37,000
	2002	95	$21,378	$19,000
Bristol Bay Salmon Drift (cont.)	2003	118	$29,311	$30,000
	2004	86	$36,855	$35,000
	2005	150	$50,482	$50,000
	2006	104	$74,341	$75,000
	2007	152	$78,224	$79,000
	2008	90	$87,906	$89,400
	2009	107	$79,462	$78,000
	2010	132	$100,709	$98,000
Bristol Bay Salmon Setnet	1980	50	$30,575	$30,000
	1981	56	$32,370	$35,000
	1982	71	$37,359	$40,000
	1983	49	$41,680	$42,000
	1984	47	$40,766	$40,000
	1985	48	$35,974	$36,750
	1986	61	$33,300	$33,500
	1987	64	$34,453	$35,000
	1988	47	$46,508	$45,000
	1989	39	$63,731	$60,000
	1990	34	$60,147	$66,250
	1991	39	$58,321	$62,500
	1992	47	$48,904	$50,000
	1993	31	$48,016	$50,000
	1994	30	$35,767	$36,000
	1995	36	$41,797	$40,000
	1996	49	$41,253	$40,500
	1997	33	$38,985	$38,000
	1998	30	$30,760	$30,000
	1999	31	$31,306	$30,000
	2000	34	$31,659	$31,650
	2001	34	$24,871	$26,750
	2002	32	$12,895	$12,000
	2003	36	$13,758	$12,000
	2004	33	$14,262	$13,000
	2005	48	$14,580	$15,000
	2006	47	$22,896	$24,000
	2007	36	$25,589	$24,550
	2008	35	$25,534	$26,500
	2009	47	$27,687	$29,000
	2010	50	$27,680	$29,000
Bristol Bay Herring Spawn on Kelp	1993	1	**	**
	1994	4	$5,375	$5,250
	1995	5	$4,052	$4,761
	1996	6	$4,500	$4,500
	1997	4	$5,000	$4,750
	2000	3	**	**
Goodnews Bay Herring Gillnet	2003	1	**	**
	2010	1	**	**
Kuskokwim Salmon Gillnet	1980	16	$6,875	$7,000
	1981	14	$8,339	$8,000
	1982	8	$9,563	$10,000
	1983	9	$10,222	$10,000
	1984	15	$9,893	$10,000
	1985	6	$10,083	$10,000
	1986	15	$10,133	$10,000
	1987	8	$9,563	$10,000
	1988	18	$9,669	$10,000
	1989	20	$12,050	$11,250
	1990	18	$12,056	$12,000
	1991	12	$13,417	$14,250
	1992	15	$12,333	$13,000
	1993	17	$12,735	$12,500
	1994	5	$12,500	$12,500
	1995	15	$11,967	$12,000
	1996	3	**	**
	1997	6	$9,683	$10,000
	1998	4	$9,000	$9,000

Table 13. Mean and Median Permit Prices From Survey Data, by Permit Type and Year

Permit Type	Year	Number of Sales	Mean Value	Median Value
Kuskokwim Salmon Gillnet (cont.)	1999	3	**	**
	2000	2	**	**
	2001	2	**	**
	2002	1	**	**
	2003	1	**	**
	2004	1	**	**
	2005	4	$5,750	$5,000
	2006	4	$7,000	$6,500
	2007	2	**	**
	2008	9	$5,894	$6,000
	2009	4	$5,750	$6,000
	2010	15	$6,003	$6,000
Nelson Island Her Gillnet	1995	2	**	**
	1996	3	**	**
	1997	1	**	**
	2000	1	**	**
	2002	1	**	**
Nunivak Island Her Gillnet	1996	1	**	**
Lower Yukon Salmon Gillnet	1980	9	$9,289	$9,000
	1981	11	$9,545	$10,000
	1982	12	$18,250	$16,500
	1983	25	$22,240	$21,000
	1984	17	$28,441	$26,000
	1985	12	$22,917	$23,000
	1986	11	$22,455	$23,500
	1987	12	$20,688	$20,750
	1988	13	$20,669	$20,200
	1989	11	$25,527	$25,000
	1990	9	$24,778	$25,000
	1991	12	$23,904	$25,000
	1992	10	$27,680	$30,000
	1993	8	$31,359	$30,000
	1994	7	$24,543	$24,800
	1995	10	$23,000	$21,500
	1996	11	$19,500	$19,000
	1997	9	$17,489	$18,000
	1998	12	$15,958	$15,250
	1999	12	$12,167	$12,250
	2000	12	$12,125	$12,000
	2001	2	**	**
	2002	2	**	**
	2003	3	**	**
	2004	15	$8,407	$7,500
	2005	9	$8,400	$8,000
	2006	15	$8,553	$9,000
	2007	10	$10,050	$10,000
	2008	9	$8,778	$8,500
	2009	4	$9,100	$9,200
	2010	1	**	**
Lower Yukon Herring Gillnet	2005	1	**	**
Upper Yukon Salmon Gillnet	1981	3	**	**
	1982	6	$8,367	$9,500
	1983	5	$10,600	$12,000
	1984	1	**	**
	1985	2	**	**
	1986	3	**	**
	1987	2	**	**
	1988	3	**	**
	1989	4	$9,875	$10,000
	1990	4	$11,250	$11,500
	1991	1	**	**
	1993	1	**	**
	1996	1	**	**
	1999	1	**	**
	2004	1	**	**
	2005	1	**	**

Permit Type	Year	Number of Sales	Mean Value	Median Value
Upper Yukon Salmon Gillnet (cont.)	2006	1	**	**
	2007	1	**	**
	2008	1	**	**
Upper Yukon Salmon Fish Wheel	1980	5	$9,320	$11,100
	1981	14	$10,893	$10,000
	1982	8	$10,500	$11,000
	1983	7	$11,643	$13,000
	1984	6	$12,333	$13,000
	1985	3	**	**
	1986	2	**	**
	1987	9	$9,089	$9,000
	1988	5	$8,700	$9,500
	1989	3	**	**
	1990	6	$11,667	$12,500
	1991	7	$10,843	$10,400
	1992	5	$10,900	$10,000
	1993	3	**	**
	1994	3	**	**
	1995	1	**	**
	1996	5	$8,700	$8,500
	1997	2	**	**
	1998	2	**	**
	1999	2	**	**
	2002	1	**	**
	2003	1	**	**
	2006	1	**	**
	2007	1	**	**
	2008	2	**	**
	2009	1	**	**
Norton Sound Salmon Gillnet	1980	11	$7,909	$7,000
	1981	10	$9,450	$10,000
	1982	10	$10,100	$10,000
	1983	7	$11,429	$12,000
	1984	5	$13,150	$12,500
	1985	6	$12,167	$12,000
	1986	6	$10,167	$10,500
	1987	4	$9,750	$10,000
	1988	3	**	**
	1989	7	$9,214	$10,000
	1990	2	**	**
	1991	5	$8,100	$8,000
	1992	2	**	**
	1993	2	**	**
	1994	4	$7,775	$7,550
	1995	5	$6,820	$7,000
	1996	2	**	**
	1997	4	$5,175	$5,250
	1998	3	**	**
	1999	1	**	**
	2000	2	**	**
	2003	1	**	**
	2006	2	**	**
	2007	8	$4,125	$4,500
	2008	9	$4,456	$4,800
	2009	10	$5,030	$5,000
	2010	8	$5,588	$5,600
Norton Sd Her Beach Seine	2000	1	**	**
Norton Sound Herring Gillnet	1990	26	$29,731	$30,000
	1991	27	$35,370	$37,000
	1992	8	$27,813	$28,250
	1993	4	$22,250	$21,250
	1994	8	$14,000	$13,000
	1995	20	$13,550	$12,000
	1996	48	$21,818	$22,375
	1997	14	$18,786	$20,000
	1998	7	$9,014	$10,800

Table 13. Mean and Median Permit Prices From Survey Data, by Permit Type and Year

Permit Type	Year	Number of Sales	Mean Value	Median Value
Norton Sound Herring Gillnet (cont.)	*1999*	7	$7,929	$8,500
	2000	4	$8,500	$7,000
	2001	9	$4,564	$5,000
	2002	1	**	**
	2003	2	**	**
	2004	4	$2,900	$2,800
	2005	3	**	**
	2006	4	$1,875	$2,000
	2008	1	**	**
	2010	4	$1,363	$1,250
Kotzebue Salmon Gillnet	*1980*	3	**	**
	1981	8	$7,813	$7,750
	1982	11	$9,591	$10,000
	1983	12	$13,083	$14,500
	1984	2	**	**
	1985	3	**	**
	1986	6	$10,819	$10,708
	1987	4	$9,500	$9,000
	1988	11	$7,505	$8,000
	1989	3	**	**
	1990	8	$8,250	$7,500
	1991	1	**	**
	1992	4	$10,500	$9,500
	1993	2	**	**
	1994	1	**	**
	1995	3	**	**
	1996	1	**	**
	1998	2	**	**
	1999	2	**	**
	2000	3	**	**
	2001	2	**	**
	2005	1	**	**
	2008	1	**	**
	2009	5	$3,600	$2,500
	2010	1	**	**

** Confidential due to less than four transactions

Endnotes

1. (page 1) By the end of 2010, maximum number regulations have been adopted for 66 fisheries. No permanent entry permits have been issued in the Prince William Sound sablefish pot gear fishery, and therefore the fishery does not appear in this report. In addition, 2 fisheries are under a vessel limited entry program, and are also not reported herein.

2. (page 2) Although 14,175 transferable permits were initially issued (Table 3), the number of transferable permits remaining at the end of 2010 was 13,595 (Tables 1 and 4). The net loss of 580 transferable permits is due to the cancellation of transferable permits and the addition of permits that were converted from nontransferable to transferable status due to additional point awards through the CFEC adjudication process.

3. (page 2) Because some permits may be transferred more than once during a year, the ratio of permits transferred to available transferable permits would be slightly less.

4. (page 4) The Alaska Urban Local category is not applicable for several fisheries which have no local urban communities. These fisheries are: Yakutat Salmon Setnet; Chignik Salmon Seine; Bristol Bay Salmon Drift and Setnet; Bristol Bay Herring Spawn on Kelp; Lower Yukon Salmon and Herring Gillnet; Prince William Sound Salmon Seine, Drift and Setnet; Prince William Sound Herring Seine, Gillnet and Spawn on Kelp Pound; Prince William Sound Sablefish; and the Nelson Island, Nunivak Island, and Goodnews Bay Herring Gillnet fisheries.

5. (page 14) Because a person may hold more than one permit, the annual mean age may include the age of a person more than one time in its calculation. A person's age is included in the calculation for each permit held.

6. (page 15) For the purposes of this document, the transfer of a permit as part of an inheritance is considered a gift.

7. (page 17) See *CFEC Changes in the Distribution of Permit Ownership in Alaska's Limited Fisheries, 1975-1981*; February, 1983.

8. (page 18) The percentage of state-financed permits increases to 21.7% when only the purchases by Alaska residents are considered (Table 12).

9. (page 20) Permit price estimates produced for this report may differ from the CFEC monthly permit value report due to more stringent criteria for exclusion used in the monthly report.

Commercial Fishing Loan Fund

Loan Program Goal and Objectives

To provide long-term, low interest loans to promote the development of predominantly resident fisheries, and continued maintenance of commercial fishing vessels and gear for the purpose of improving the quality of Alaska seafood products.

General Requirements

- Alaska resident for the past 2 years.
- Child support payments must not be past due.
- Provide a copy of each applicant's valid government issued identification at or before loan closing.

Definition of Resident

- Living in Alaska with the intent to remain indefinitely.
- Primary and permanent home in Alaska.
- Present in Alaska except for brief intervals (generally less than 90 days) except for military service, education or good cause.

Program Requirements

- Purchases - Loans are available for limited entry permits, quota shares, vessels, or gear purchased less than 12 months prior to the date your application is received.
- Refinancing - Vessels or gear loans made by other lenders more than one year prior to receipt of your application are eligible for financing.
- Collateral - The item being financed (limited entry permit, vessel, etc.) will be the collateral for the loan and, and generally, a priority lien must be obtained.

Terms and Conditions

- Interest rate is 2% above the Prime Rate, not to exceed 10.5%, not less than 3%.
- Interest rate for Product Quality Improvement and engine fuel efficiency upgrade loans is 2% **below** the Prime Rate, not to exceed 10.5%, not less than 3%.
- Interest rate will be fixed at the time of loan approval.
- Maximum loan term is 15 years.
- Borrower is responsible to pay all direct costs incurred in processing an application including surveys, inspections, appraisals, title insurance, etc.

Information and Applications

- Community Quota Entity (CQE)
- Engine Fuel Efficiency Upgrade
- Extension
- Limited Entry Permit Purchase
- Loan Assumption
- Product Quality Improvement
- Purchase of Quota Shares
- Refinance
- Refinance of Vessel or Gear
- Tax Obligation
- Tender Vessel Product Quality Improvement
- Vessel Purchase
- Vessel Upgrade or Gear Purchase/Upgrade

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Quick Links...

- Alaska Capstone Avionics Loan Program
- Community Quota Entity (CQE)
- Commercial Fishing
- Small Business Economic Development
- Rural Development Initiative Fund
- Fisheries Enhancement

Of Interest...

- Interest Rates
- IFQs for Sale
- Permits for Sale
- Real Estate for Sale
- Vessels for Sale
- Auto Pay Program
- 'TEL' Payment Program
- Staff Photos
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Commercial Fishing Loan Fund

Limited Entry Permit

Select either Section A or B

Section A

Eligibilty

- Held limited entry permit, commercial fishing or crew member license for the year preceding the date of application and any other 2 of the past 5 years;

and

- Fished in Alaskan waters during qualifying years.

If you receive a loan under Section A, you will not be eligible for future loans under Section B unless the loan requested under Section A was for engine fuel efficiency.

Lending Limit

- The total balances outstanding on all loans made under Section A of the Commercial Fishing Loan Program may not exceed $300,000.
- The total blances outstanding on all loans made under the Program may not exceed $400,000.

Section B

Eligibility

- At least 25% of applicant's total gross income for past 2 years was from commercial fishing;

or

- Applicant lacks training or employment opportunities in area of residence other than commercial fishing;

and

- Applicant is not eligible for financing from a recognized commercial lender.

Section B applicants may not have received a prior loan under Section A at any time.

Lending Limit

- The total balances outstanding on all loans made under Section B of the Commercial Fishing Loan Program may not exceed $100,000.
- The total balances outstanding on all loans made under the Program may not exceed $400,000.

Sections A & B

Collateral Requirements

- Generally, the maximum loan amount for a loan secured by a limited entry permit is 80% of either the market value (as valued by the Commercial Fisheries Entery Commission) or the purchase price, whichever is less.
- The maximum loan amount may be increased by offering additional collateral.

Terms and Conditions

- Interest rate is 2% above the Prime Rate, not to exceed 10.5%, not less than 3%, fixed at the time of loan approval.
- Maximum loan term is 15 years.
- Borrower is responsible for all direct costs incurred in processing an application.

Fees

- A $100 application fee must accompany all applications.
- Prequalification Fee - $200.00. If you have not located a limited entry permit to purchase, you may want to obtain conditional approval by submitting a prequalification application.

  The following are some advantages to prequalification:
  - You know your loan limit
  - Seller is assured of a qualified buyer
  - Faster loan processing after finding the permit
  - Loan funds are committed
  - Approval is valid for 60 days

- An origination fee of 1% of the loan amount will be deducted from your loan proceeds at closing.

Limited Entry Permit Loan Application Package

There are different pages 1 and 2 for each different type of loan (limited entry permit, vessel purchase, etc.). If you are applying for more than one type of loan, complete pages 1 and 2 for each type of loan, then complete one set of pages 3 through 13. A separate application fee is required for each type of loan.

The following Commercial Fishing Limited Entry Permit Application pages are in PDF format. You will need the Adobe Reader in order to view/print them. Acrobat Reader is distributed freely and available for download from Adobe®.

Loan Application

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Commercial Fishing Loan Fund

Vessel Purchase - Section B

Eligibilty

- At least 25% of applicant's total gross income for past 2 years was from commercial fishing;

or

- Applicant lacks training or employment opportunities in area of residence other; than commercial fishing;

and

- Applicant is not eligible for financing from a recognized commercial lender.

Section B applicants may not have received a prior loan under Section A at any time unless the loan requested under Section A was for engine fuel efficiency.

Lending Limit

- The total balances outstanding on all loans made under Section B of the Commercial Fishing Loan program may not exceed $100,000.
- The total balances outstanding on all loans made under the program may not exceed $400,000.

Collateral Requirements

- Generally, the maximum amount for a loan secured by a documented vessel is 75% (65% for AK vessels) of either the survey value or the purchase price, whichever is less.

  Example:
  The survey value of a vessel is $120,000 and the purchase price is $100,000.

  Maximum Loan amount $75,000: 75% of the purchase price (for documented vessels), as it is less than the survey value.

  or

  Maximum loan amount = $65,000: 65% of the purchase price (for AK vessels), as it is less than the survey value.

- The maximum loan amount may be increased by offering additional collateral.

Terms and Conditions

- Interest rate is 2% above the Prime Rate, not to exceed 10.5%, not less than 3%, fixed at the time of loan approval.
- Maximum loan term is 15 years.
- Borrower is responsible for all direct costs incurred in processing an application.

Fees

- A $100 application fee must accompany all applications.
- Preauthorization Fee - $100.00. If you have not located a vessel to purchase, you may want to obtain conditional approval by submitting a preauthorization application.

  The following are some advantages to preauthorization:
  - You know your loan limit
  - Seller is assured of a qualified buyer
  - Faster loan processing after finding a vessel
  - Loan funds are committed
  - Approval is valid for 90 days

- An origination fee of 1% of the loan amount will be deducted from your loan proceeds at closing.

Quick Links...

- Alaska Capstone Avionics Loan Program
- Community Quota Entity (CQE)
- Commercial Fishing
- Small Business Economic Development
- Rural Development Initiative Fund
- Fisheries Enhancement

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Vessel Purchase Loan Application Package

There are different pages 1 and 2 for each different type of loan (limited entry permit, vessel purchase, etc.). If you are applying for more than one type of loan, complete pages 1 and 2 for each type of loan, then complete one set of pages 3 through 13. A separate application fee is required for each type of loan.

The following Commercial Fishing Vessel Purchase Application pages are in PDF format. You will need the Adobe Reader in order to view/print them. Acrobat Reader is distributed freely and available for download from Adobe®.

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Commercial Fishing Loan Fund

Vessel Upgrade or Gear Purchase/Upgrade - Section B

The following types of loans are available under this loan purpose category:

- All types of vessel upgrades (for product quality improvement, see PQI page)
- Gear purchases
- Engine rebuilds
- Engine replacements (for engine fuel efficiency, see engine fuel efficiency upgrade page)

Eligibilty

- At least 25% of applicant's total gross income for past 2 years was from commercial fishing;

or

- Applicant lacks training or employment opportunities in areas of residence other than commercial fishing;

and

- Applicant is not eligible for financing from a recognized commercial lender.

Section B applicants may not have received a prior loan under Section A at any time unless the loan requested under Section A was for engine fuel efficiency.

Lending Limit

- The total balances outstanding on all loans made under Section B of the Commercial Fishing Loan Program may not exceed $100,000.
- The total balances outstanding on all loans made under the Program may not exceed $400,000.

Collateral Requirements

- Generally, the maximum loan amount for a loan secured by a documented vessel is 75% of the survey value (65% for AK vessels).
- The maximum loan amount may be increased by offering additional collateral.

Terms and Conditions

- Interest rate is 2% above the Prime Rate, not to exceed 10.5%, not less than 3%, fixed at the time of loan approval.
- Interest rate is 2% below the Prime Rate for engine replacement and rebuilds that will improve fuel efficiency, fixed at the time of loan approval.
- Maximum loan term is 15 years.
- Borrower is responsible for all direct costs incurred in processing an application.

Fees

- A $100 application fee must accompany all applications.
- An Orgination Fee of 1% of the loan amount will be deducted from your loan proceeds at closing.

Vessel Upgrade or Gear Purchase/Upgrade - Section B Loan Application Package

There are different pages 1 and 2 for each different type of loan (limited entry permit, vessel purchase, etc.). If you are applying for more than one type of loan, complete pages 1 and 2 for each type of loan, then complete one set of pages 3 through 13. A separate application fee is required for each type of loan.

The following Commercial Fishing Vessel or Gear Purchase/Upgrade Application pages are in PDF format. You will need the Adobe Reader in order to view/print them. Acrobat Reader is distributed freely and available for download from Adobe®.

Quick Links...

- Alaska Capstone Avionics Loan Program
- Community Quota Entity (CQE)
- Commercial Fishing
- Small Business Economic Development
- Rural Development Initiative Fund
- Fisheries Enhancement

Of Interest...

- Interest Rates
- IFQs for Sale
- Permits for Sale
- Real Estate for Sale
- Vessels for Sale
- Auto Pay Program
- 'TEL' Payment Program
- Staff Photos
- Comments
- Related Sites

Commercial Fishing Loan Fund

Engine Fuel Efficiency Upgrade

Select either Section A or B
Purpose of the upgrade must be to improve the fuel efficiency of the propulsion engine or generator engine replacement on an existing vessel.

Section A

Eligibilty

- Held limited entry permit, commercial fishing or crew member license and 2 other years out of the past 5 years;

and

- Fished in Alaskan waters during qualifying years.

If you receive a loan under Section A, you will not be eligible for future loans under Section B unless the loan requested under Section A was for engine fuel efficiency.

Lending Limit

- The total outstanding balances on all loans made under Section A of the Commercial Fishing Loan Program may not exceed $300,000.
- Total Balance outstanding on all Section A and Section B loans may not exceed $400,000.

Section B

Eligibility

- At least 25% of applicant's total gross income for past 2 years was from commercial fishing;

or

- Applicant lacks training or economic opportunities in area of residence other than commercial fishing;

and

- Applicant does not have other sources of financing available.

Section B applicants may not have received a prior loan under Section A at any time.

Lending Limit

- The total outstanding balances on all loans made under Section B of the Commercial Fishing Loan Program may not exceed $100,000.

Sections A & B

Collateral Requirements

- Generally, the maximum loan amount for a loan secured by a documented vessel is 75% of the survey value (65% for AK vessels).
- The maximum loan amount may be increased by offering additional collateral.

Fees

- A $100 application fee must accompany all applications.
- An origination fee of 1% of the loan amount will be deducted from your loan proceeds at closing.

Engine Fuel Efficiency Upgrade Loan Application Package

Quick Links...

- Alaska Capstone Avionics Loan Program
- Community Quota Entity (CQE)
- Commercial Fishing
- Small Business Economic Development
- Rural Development Initiative Fund
- Fisheries Enhancement

Of Interest...

- Interest Rates
- IFQs for Sale
- Permits for Sale
- Real Estate for Sale
- Vessels for Sale
- Auto Pay Program
- 'TEL' Payment Program
- Staff Photos
- Comments
- Related Sites

There are different pages 1 and 2 for each different type of loan (limited entry permit, vessel purchase, etc.). If you are applying for more than one type of loan, complete pages 1 and 2 for each type of loan, then complete one set of pages 3 through 13. A separate application fee is required for each type of loan.

The following Commercial Fishing Engine Fuel Efficiency Upgrade Application pages are in PDF format. You will need the Adobe Reader in order to view/print them. Acrobat Reader is distributed freely and available for download from Adobe®.

Loan Application

The Division of Economic Development, Department of Commerce, Community, and Economic Development complies with Title II of the Americans with Disabilities Act of 1990. This publication is available in alternative communication formats upon request. Please contact the Division of Economic Development at (907)465-2510 or TDD (907)465-5437 to make any necessary arrangements.

Toll Free 1-800-478-5626 within Alaska
Juneau Office - 3032 Vintage Blvd. Suite 100 - PO Box 34159 - Juneau, AK 99803-4159 - (907)465-2510 - Fax (907)465-2103 - TDD (907)465-4410
Anchorage Office - 550 W. 7th Ave. Suite 1770 - Anchorage, AK 99501-3569 - (907)269-8150 - Fax (907)269-8147
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Commercial Fishing Loan Fund

Product Quality Improvement

Select either Section A or B
Purpose of the upgrade must be to improve the quailty of the seafood.

Section A

Eligibilty

- Held limited entry permit, commercial fishing or crew member license for the year preceding date of application and 2 other years out of the past 5 years;

and

- Fished in Alaskan waters during qualifying years.

If you receive a loan under Section A, you will not be eligible for future loans under section B unless the loan requested under Section A was for engine fuel efficiency.

Lending Limit

- The total balances outstanding on all loans made under Section A of the Commercial Fishing Loan program may not exceed $300,000.
- The total balances outstanding on all loans made under the program may not exceed $400,000.

Section B

Eligibility

- At least 25% of applicant's total gross income for past 2 years was from commercial fishing;

or

- Applicant lacks training or employment opportunities in area of residence other than commercial fishing;

and

- Applicant is not eligible for financing from a recognized commercial lender.

Section B applicants may not have received a prior loan under Section A at any time.

Lending Limit

- The total balance outstandings on all loans made under Section B of the Commercial Fishing Loan program may not exceed $100,000.
- The total balances outstanding on all loans made under the program may not exceed $400,000.

Sections A & B

Collateral Requirements

- Generally, the maximum loan amount for a loan secured by a documented vessel is 75% of the survey value (65% for AK vessels).
- The maximum loan amount may be increased by offering additional collateral.

Terms and Conditions

- Interest rate is 2% below the Prime Rate, not to exceed 10.5%, not less than 3%, fixed at the time of loan approval.
- Maximum loan term is 15 years.
- Borrower is responsible for all direct costs incurred in processing an application.

Quick Links...

- Alaska Capstone Avionics Loan Program
- Community Quota Entity (CQE)
- Commercial Fishing
- Small Business Economic Development
- Rural Development Initiative Fund
- Fisheries Enhancement

Of Interest...

- Interest Rates
- IFQs for Sale
- Permits for Sale
- Real Estate for Sale
- Vessels for Sale
- Auto Pay Program
- 'TEL' Payment Program
- Staff Photos
- Comments
- Related Sites

Fees

- A $100 application fee must accompany all applications.
- An origination fee of 1% of the loan amount will be deducted from your loan proceeds at closing.

Product Quality Improvement Loan Application Package

There are different pages 1 and 2 for each different type of loan (limited entry permit, vessel purchase, etc.). If you are applying for more than one type of loan, complete pages 1 and 2 for each type of loan, then complete one set of pages 3 through 13. A separate application fee is required for each type of loan.

The following Commercial Fishing Product Quality Improvement Application pages are in PDF format. You will need the Adobe Reader in order to view/print them. Acrobat Reader is distributed freely and available for download from Adobe®.

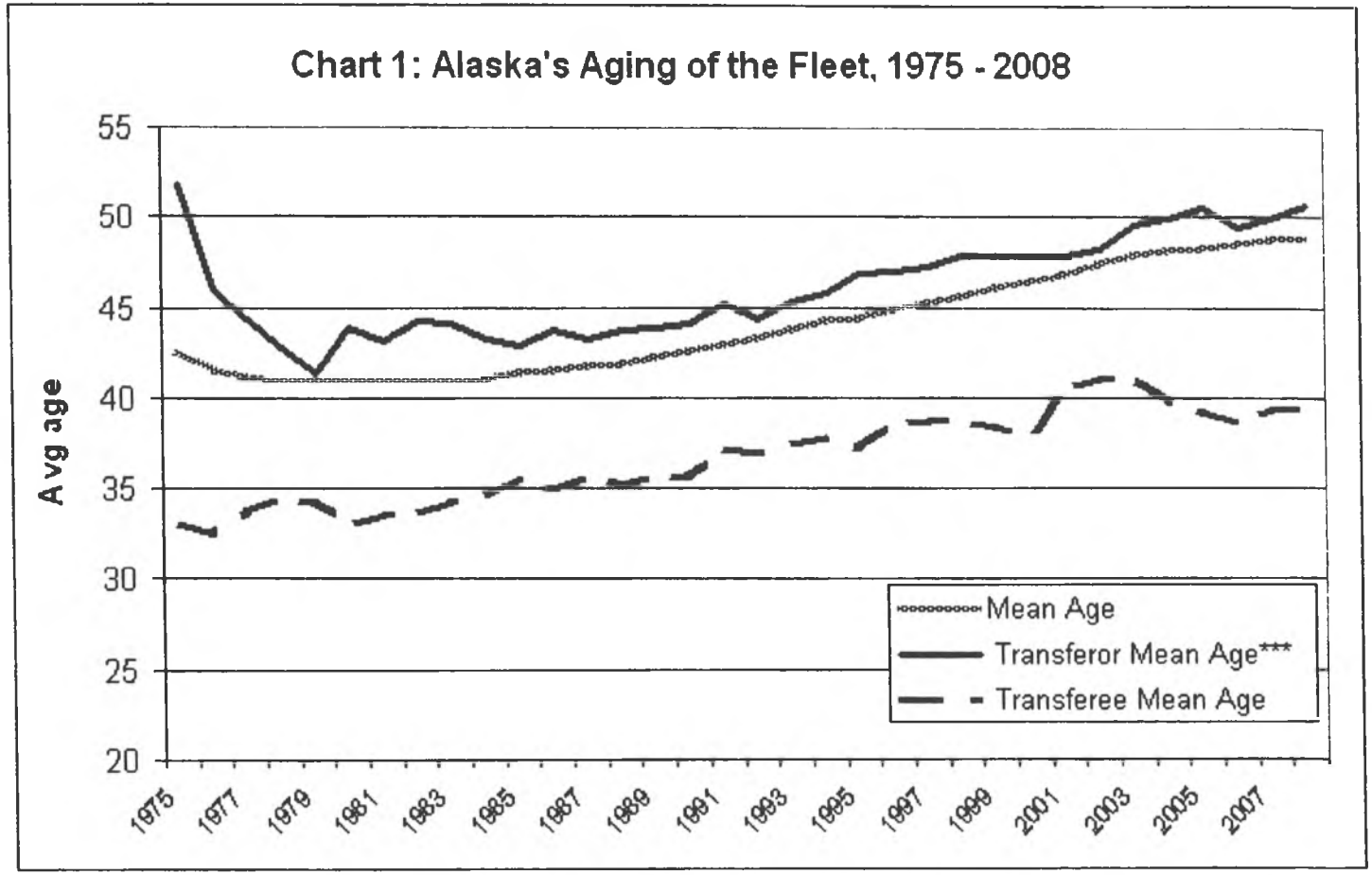
Loan Application

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RURAL FISHERIES OVERVIEW - GENERAL

Aging of the Fleet



RURAL FISHERIES OVERVIEW - GENERAL

Aging of the Fleet – By Salmon Fishery



Fishery and Region	2008 Average Age	Fishery and Region	2008 Average Age
Kotzebue Gillnet	51.7	Kodiak Seine	50.4
Norton Sound Gillnet	48.3	Kodiak Set	46.4
Upper Yukon Gillnet	59.9	Cook Inlet Seine	49.1
Lower Yukon Gillnet	45.3	Cook Inlet Drift	48.5
Kuskokwim Gillnet	44.2	Cook Inlet Set	47.4
Bristol Bay Drift	47.9	PWS Seine	49.6
Bristol Bay Set	43.4	PWS Drift	48.4
Alaska Peninsula Seine	53.6	Yakutat Set Net	45.9
Alaska Peninsula Drift	48.2	Power Trollers	53.9
Alaska Peninsula Set	47.1	Southeast Seine	52.5
Chignik Seine	52.6	Southeast Drift	50.4

Rural Fisheries Overview - Rural



Why does it matter?

- Potential revenue from a typical diversified operation can be a big deal in a small town
  - Southeast drift net – $59,684
  - Dungeness crab pot (225 pots) – $34,107
  - 5,000 pounds of halibut – $31,250
  - Total – $125,041

- Cost of entry
  - Vessel & gear – $150,000
  - Drift net permit - $68,800
  - Dungeness permit - $39,300
  - 5,000 pounds of IFQ - $135,000
  - Total - $393,100

Debt service
$30K annually

Should the University of Alaska Offer a Formal Training Program in Commercial Fisheries?

Survey Highlights

The University of Alaska Sea Grant Marine Advisory Program collected input in an online survey for 10 weeks in early 2011 of commercial fishing captains and crew, retired fishermen, people interested in becoming a fisherman, and those supporting the commercial fishing industry with their goods and services, including scientists and educators. The purpose of this survey was to understand if a formal University-sponsored training program in commercial fisheries would be of value and, if so, what subjects would be most important to offer. MAP reached survey respondents through various media outlets and direct email lists. The following are highlighted results based on the 185 people who participated in the survey.

Survey Respondents

Sixty-three percent of the respondents are active fishermen (Figure 1).

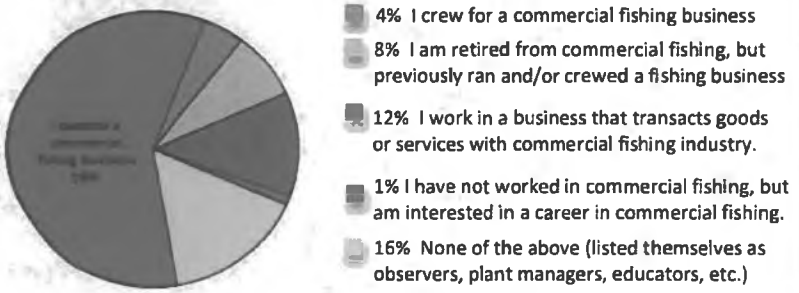


Figure 2. How respondents are involved in the fishing industry

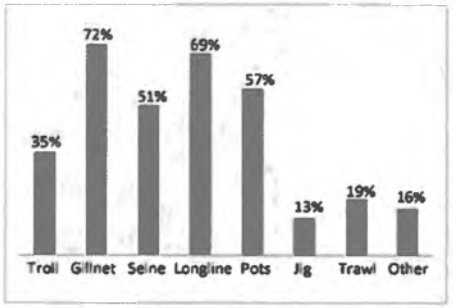


Figure 2. Fishing gear groups

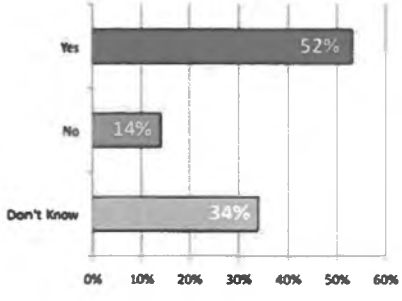


Figure 3. Fishing location

Respondents represent coastal areas throughout Alaska and a variety of gear groups. The greatest number (72%) had used gillnets, followed closely by longline gear at 69% (Figure 2). Fishing locations for these respondents were distributed statewide (Figure 3).

Training and Education for Fishermen

Is it a good idea? Seventy-nine percent of respondents had attended workshops and/or training related to fishing and 88% responded that this had helped their fishing careers. Fifty-two percent believe the University of Alaska **should** offer a formal training program in commercial fisheries; 34% said "don't know" and 14% said "no."



Eighty people offered specific concerns and recommendations about establishing a program.

- Cost of the program for students
- Need for hands-on training
- Timing and location of classes be compatible with fishing season

Additionally, concerns were expressed that by establishing a certificate program, it would become an industry mandate, which would discourage participants, increase barriers to entry and encourage other mandates upon the industry.

Figure 4. Should a formal commercial fisheries training program be offered by the University of Alaska?

What would need to be included to make a formal training program most effective and useful?

What? ..... Important core (or required) classes would include: ***Marine safety, Marine navigation and seamanship, and Seafood handling and quality.*** Next in line of importance is: ***Vessel maintenance and repair, Understanding regulatory processes & fisheries management and Maritime law.***

Classes that might be optional additions to the program included: ***Welding, Direct Marketing, Dive Instruction, Refrigeration.***

How Long?..... The typical duration of time each class should be offered varies between a ***week or less, to several weeks***.

Preferred core classes listed above include the following preferred durations: ***Marine safety, "one week or less," Marine navigation and seamanship for "several weeks,"*** and ***Seafood handling and quality, "one week or less"***

When? ..... The best months to incorporate in-class learning are (in priority order) ***January, February, December, and November.***

How? ..... The most consistent comment throughout the survey was the ***importance of hands-on learning and experience.***

Would it help you and how?

- Seventy-seven percent of total respondents "strongly or somewhat agree" that a ***formal training program would make an inexperienced individual a better fisherman***. Thirty-nine percent of respondents elaborated on this point and emphasized that all training is helpful, not necessarily a formal training program, and specified the need for hands-on learning and fishing experience. (Figure 5)
- Seventy-two percent "strongly or somewhat agree" that they ***would be interested in hiring someone with a certificate.*** (Figure 6)
- Respondents were asked to what extent they agreed with nine listed ways in which a training program in commercial fisheries could be useful. The strongest sentiment was that the program would ***improve the financial management*** of their fishing operation. (Figure 7)

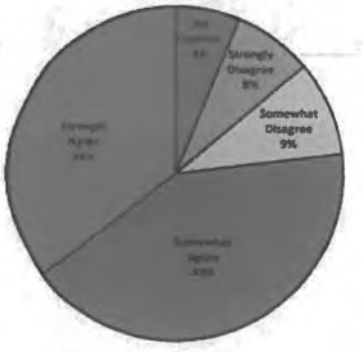


Figure 5. Would training help an inexperienced fisherman?

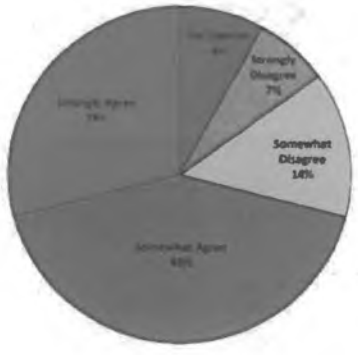


Figure 6. More likely to hire someone with a commercial fisheries certificate?

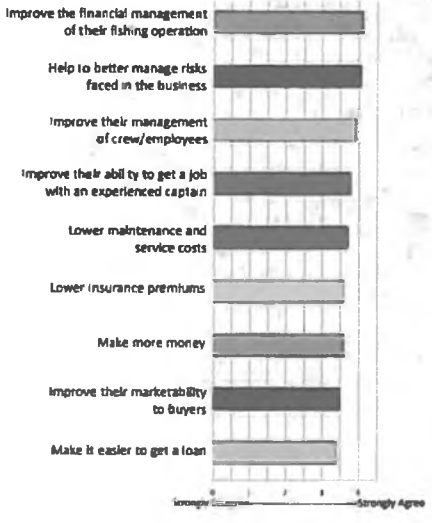


Figure 7. How training would be useful?

Summary

Results of this survey and list of comments can be found at seagrant.uaf.edu/map/fishbiz/trainingsurvey/index.php. The Marine Advisory Program appreciates the responses and will use the results of the survey in their design of classes and in the analysis of formal training for commercial fishermen. Please contact us with questions at map@sfos.uaf.edu.

Sea Grant Alaska
Marine Advisory Program
seagrant.uaf.edu

Examples of Past Marine Advisory Program Workshops for Commercial Fishers

Business of Fish Course (Fall 2008)

The Business of Fish is a non-credited University course targeted to the commercial fishing sector. Business of Fish will cover a number of subjects related to financial management for a commercial fishing operation.

Intro to Direct Marketing

Getting started in the direct marketing business

Topics Covered:
Defining Direct Marketing, Finding Customers, Starting your Business, Using E-Commerce, Distributing Seafood, Considering Quality, Seafood Marketing, and Packaging and Shipping Seafood Products.

Financial Statements & Record Keeping for Fishing Operations Workshop

Join Marine Advisory Program Fisheries Business Specialist, Glenn Haight for a hands-on business seminar on:

- Understanding Financial Statements
- Evaluating New Fishing Investments
- Bookkeeping for a Fishing Operation

Sitka Seafood Marketing Workshops

A two-day series of discussions and workshops for community members and fishermen

Discussion: Examining Sitka's Place in the World Seafood Market

MAP Marketing Specialist - Quentin Fong

Thursday, October 25 - 7:30 - 9:00 pm Centennial Hall

Workshop: Business Planning for Direct Marketers

MAP Fisheries Business Specialist - Glenn Haight

Friday, October 26 - 8:30 a.m. - noon NSRAA Conference Room

Workshop: Introduction to Direct Marketing

MAP Fisheries Business Specialist - Glenn Haight

Friday, October 26 - 1:00 - 5:00 p.m. NSRAA Conference Room

Private Consultations

Glenn Haight - Quentin Fong

Friday, October 26 - 7:00 - 9:00 p.m. NSRAA Conference Room

Compiled from Marine Advisory Program Web Pages by the House Special Committee on Fisheries.

Nome Seafood Business and Marketing Workshops

Understanding Financial Statements
Monday October 22 9:00 – 11:00am NWC conference room
A review of various financial statements and their function in financial management - balance sheet, income statement, cash flow statement. MAP business specialist Glenn Haight.

Evaluating New Fishing Investments
Monday October 22 11:00am – 12:00pm NWC conference room
Review of the FishBiz Fishing Business Spreadsheets which allow a fishing operation to project estimated revenues and costs and determine if new fisheries will be profitable. MAP business specialist Glenn Haight.

Business Planning (Part 1)
Monday October 22 1:30 – 4:30pm NWC conference room
Planning part 1 will cover an intro to business planning, how to pre-evaluate an opportunity, business descriptions, and strategic planning. MAP business specialist Glenn Haight
Discussion of Norton Sound's Place in the Global Seafood Market
Monday October 22 7:00 – 9:00pm NWC classroom B
Examine the world market for seafood today, including the competition. MAP marketing specialist Quentin Fong.

Business Planning (Part 2)
Tuesday October 23 9:00am – 12:00pm NWC conference room
Planning part 2 will cover production and operations plans, marketing plan and financial pro formas. MAP business specialist Glenn Haight.

Private Consultations
Tuesday October 23 1:00pm – 4:00pm NWC conference room
Glenn Haight and Quentin Fong will be available for one-on-one meetings with fishermen, community members, direct marketers and others to talk about business and marketing specifics. Sign up in advance by calling the Nome MAP office or drop-in.

Marine Advisory Program Business and Financial Management Tools

Tools

- Online Business Plan Writer – In partnership with the University of Minnesota, the Marine Advisory Program participated in the development of AgPlan, an online business plan writer for fishing and agriculture operations. This site lets you prepare, edit, save, print, and share a tailored fisheries business plan.
- Fishing Business Spreadsheets - *three Excel workbooks and their related Word instruction files (Income Statement and Balance Sheet, Proforma Income Statement, and Q-Calc to analyze IFQ purchases).*
- Business Resource Guide for Alaska Fishermen This searchable database includes contact information for organizations, agencies, and companies that provide services to individuals and businesses in the seafood industries. You will also find listings of useful publications. Hard copy of this guide is available online.
- How to Make a Directed Transfer of Your Fishing Business
- Ocean Treasure: Commercial Fishing in Alaska
- Fishing Vessel Insurance- How Much is Enough?
- Sample Crew Member Employment Contract
- For more fisheries business publications visit the Alaska Sea Grant Bookstore
- Recoveries and Yields from Pacific Fish and Shellfish [webpage version available online at State of Alaska Commerce - Office of Economic Development website]

Other Small Business Service Providers

There are a number of other small business assistance providers in Alaska that may assist entrepreneurs starting a business.

- Alaska Small Business Development Center
- Small Business Administration
- Alaska Business Development Center

Compiled from Marine Advisory Program Web Pages by the House Special Committee on Fisheries.

Examples of Marine Advisory Program Publications
Fishing Business



Fuel-Saving Measures for Fishing Industry Vessels



Saving Fuel on Your Recreational or Charter Boat



Basic Startup Guide for the Direct Market Fisherman



Calculating Profitability for a Direct Marketing Operation



Compiled from Marine Advisory Program Web Pages by the House Special Committee on Fisheries.

Does Diesel Have a Future in the Fishing Industry?



Proceedings of the 2010 Kodiak ComFish Panel on Catch Share Programs in Alaska



Tips for Direct Marketers: Working with a Broker or Trader



Tips for Managing Yearly Fishing Income



Tracking Your Money: A Quick Guide for Alaska's Skiff Fisherman and Catcher-Seller



Save Money on Boat Fuel

Compiled from Marine Advisory Program Web Pages by the House Special Committee on Fisheries.



The Business of Fishing: Managing Finances



The Fish Entrepreneur, Vol. 2, Fall 2008



Tips to Reduce Fuel Costs for Your Boat

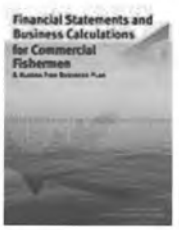


Trashing Your Livelihood: Marine Debris and Commercial Fishing



Developing Cooperatives for the Alaska Seafood Industry

Compiled from Marine Advisory Program Web Pages by the House Special Committee on Fisheries.



Financial Statements and Business Calculations for Commercial Fishermen & Alaska Fish...



The Fish Entrepreneur, Vol. 1, Fall 2007



Business Resource Guide for Alaska Fishermen



Fishing Vessel Stability: Operational Practices

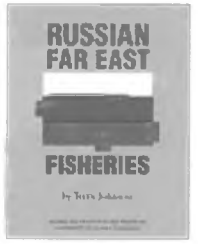


How to Make a Directed Transfer of Your Fishing Business

Compiled from Marine Advisory Program Web Pages by the House Special Committee on Fisheries.



Tips for Direct Marketers: The Onboard DEC Inspection



Russian Far East Fisheries



Charting New Courses for Alaska Salmon Fisheries: The Legal Waters



Finding a Seasonal Job on Alaska's Waters



Fishermen's Direct Marketing Manual

Compiled from Marine Advisory Program Web Pages by the House Special Committee on Fisheries.



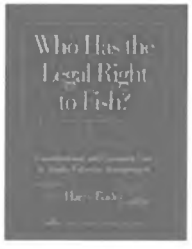
What You Need to Know about Recreational Boating Insurance



Buying Insurance for Your Charterboat



Boatkeeper: Articles on vessel outfitting, operation, and maintenance



Who Has the Legal Right to Fish? Constitutional and Common Law in Alaska Fisheries Manage...



Charter Boat Operator's Guide. Alaska's Marine Resources 8(3)

Compiled from Marine Advisory Program Web Pages by the House Special Committee on Fisheries.



Diesel Engines: Making Sense from Specs



Fishing Vessel Insurance: How Much Is Enough?



Understanding Salmon Markets



Trading Up, Saving Taxes



Understanding Fisheries Management

Compiled from Marine Advisory Program Web Pages by the House Special Committee on Fisheries.

Office of Fisheries Development

Office Information and Resources

- Frequently Asked Questions
- Reports and Documents
- Related Links

Fisheries Development Topics

- Alaska Fisheries Business Assistance Project
- Alaska Processors
- By-Product Development
- Export Services
- Fisherman Direct Marketing
- Internal Waters Processing Permit
- Regional Seafood Development Associations (RSDA's)
- Seafood Marketing
- Seafood Quality
- Shellfish Farming
- Undeveloped Commercial Seafood Opportunities

Welcome to the Office of Fisheries Development for the State of Alaska. The Office of Fisheries Development performs a number of functions related to the economic development of Alaska's commercial fishing and seafood industry. Working in conjunction with industry, state, federal, and local agencies, this office serves as a catalyst for fisheries related economic development projects in Alaska.



You are Visitor: 58193868

For more information contact:

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Commercial Seafood Development Specialist
Dept. of Commerce, Community and Economic Development
PO Box 110804
Juneau, Alaska 99801-0804
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Fax: (907) 465-3767
kevin.osullivan@alaska.gov

Staff Directory Webmaster

Quick Links...

- Alaska Product Preference
- Alaska Regional Development Organizations
- Film Program
- Tourism Development
- Minerals Development
- Fisheries Development
- Kid's Page
- Alaska Public Lands Information
- Small Business Regulations Program

Of Interest...

- Planning a Trip to Alaska
- Small Business Development
- Forest Products
- Alaska State Forestry
- AlaskaHost Training
- Customs Guide to Alaska Native Arts
- Economic Development
- List of Alaska CVBs and Chambers of Commerce
- Division of Community and Regional Development

WACDA
WESTERN ALASKA COMMUNITY DEVELOPMENT ASSOCIATION

APICDA

BBEDC

CBSFA SAINT PAUL

COASTAL VILLAGES WORK FISH HOPE

NSEDC

YUKON

ABOUT THE COMMUNITY DEVELOPMENT QUOTA PROGRAM

In coastal Western Alaska, 65 communities look out upon the Bering Sea—an expanse of the North Pacific Ocean whose waters hold some of the healthiest and most valuable fish stocks in the world. Despite this proximity, for many years lack of infrastructure and opportunity meant that the residents of this region could only watch as the wealth generated by these fisheries accrued elsewhere.

This began to change in 1992 when the North Pacific Fishery Management Council established the Community Development Quota (CDQ) program as a means to address high unemployment and limited economic opportunity in coastal Western Alaska. Designed to give these communities access to the fisheries off their coasts, the CDQ program has grown and flourished to become one of the most successful rural development initiatives undertaken in Alaska and, indeed, the nation.

The CDQ program does not depend on direct government funding for its programs and activities; rather, the six nonprofit groups that make up the program are sustained by their ability to harvest a small percentage of the fishery resources of the Bering Sea. The program-wide allocation of roughly 10 percent of many of the Bering Sea's harvestable fish stocks has made a tremendous impact on the 27,000 residents who inhabit the 65 western Alaska coastal communities included in the program. In working to fulfill their mission, CDQ groups have created jobs, infrastructure and opportunity in some of the nation's most geographically isolated and economically depressed communities.

The Western Alaska Community Development Association (WACDA), the author of this report, is the umbrella organization and governing panel for the CDQ program. A nonprofit organization authorized by amendments to the Magnuson-Stevens Fishery Conservation and Management Act in 2006, WACDA serves as the trade association for the six individual entities that are responsible for implementing the CDQ program. These six entities represent geographic regions along the Bering Sea coast and are (from south to north) Aleutian Pribilof Island Community Development Association, Central Bering Sea Fishermen's Association, Bristol Bay Economic Development Corporation, Coastal Villages Region Fund, Yukon Delta Fisheries Development Association, and Norton Sound Economic Development Corporation.

The revenue largely earned through the harvest of species such as pollock, crab and halibut have funded critical infrastructure, the development of local fisheries, training and scholarship programs, grant programs and social services in CDQ member communities. The program has enabled residents of Western Alaska to gain employment on the vessels that fish CDQ quotas, in local fish plants built with the support of harvest revenues and in myriad other jobs associated with and supported by the CDQ program. In the 18 years between the program's inception and 2010, more than $345 million has been generated in direct wages, payments to resident fishermen, scholarships and training benefits. In 2010 alone, the six CDQ groups invested more than $251 million in their communities and in fisheries activities.

The accomplishments realized by the six CDQ nonprofit entities that make up the Western Alaska Community Development Association over those 18 years speak to the overwhelming success of the program. Yet for all the achievements, there is still much work to be done.

Ever-increasing fuel prices in CDQ communities, that can be as much as triple the national average, threaten to put a chokehold on economic development. Heavily dependent on diesel fuel-fed power systems, escalating fuel costs directly drive increases in energy expenses. Additionally, many of these communities are the first to see the impacts of a changing climate as they watch the ground under their feet literally disappear due to the effects of coastal erosion. This requires costly responses, whether it be work to shore up a stretch of coastline or a river bank, or, more drastically, relocation efforts to higher ground. And while the CDQ groups continue to create jobs and employment opportunities, bringing down the unemployment rate in the region remains a challenge.

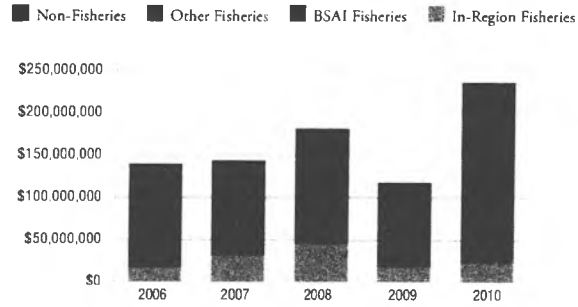
This report highlights the work of WACDA and the individual CDQ groups as they continue to address the challenges faced by their communities. The following pages illustrate how CDQ efforts and investments are helping to fulfill the statutory mandate of the program to provide eligible villages with an opportunity to participate and invest in Bering Sea fisheries, support economic development in the region, alleviate poverty, provide economic and social benefits to Western Alaska residents, and achieve sustainable and diversified local economies.

THE CDQ PROGRAM: A MODEL FOR SUSTAINABLE COMMUNITIES

Investments in Economic Capital

In pursuit of the purposes of the Western Alaska Community Development Quota program to develop sustainable, fisheries-based economies in 65 western Alaska villages, the six CDQ entities made economic investments totaling nearly $235 million in 2010. All of these investments are categorized as fisheries-related investments as defined in the Magnuson-Stevens Fishery Conservation and Management Act. Since 2006, the program also allows for nonfisheries-related investments, which are limited to 20 percent of total investments.

Aggregated Economic Investments

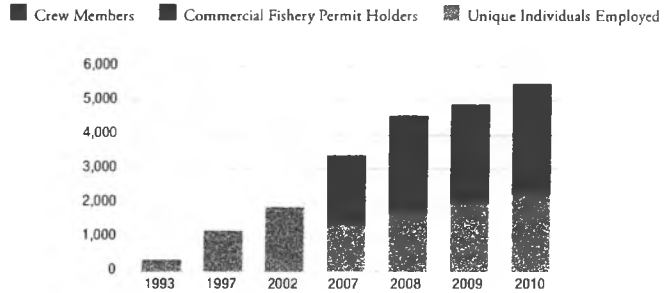


Investments in Human Capital

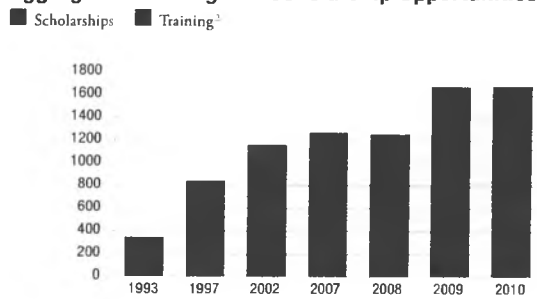
Each CDQ entity provides training and scholarship opportunities to prepare residents in eligible communities for job opportunities, skill development and career advancement. In 2010, the six CDQ entities granted more than 850 scholarships totaling a combined human capital investment of over $2 million. Combined training investments exceeded $660,000 for the year, providing more than 825 training and skill development opportunities to eligible residents.

In 2010, the six CDQ entities provided wage and salary jobs to nearly 2,300 individuals. Total combined payroll for the year exceeded $32.4 million. CDQ processors, fish-buying stations, and other fisheries businesses paid ex-vessel payments in excess of $24.7 million to more than 1,500 fishery permit holders in western Alaska. In turn, those permit holders supported an estimated 1,700 crewmember jobs.

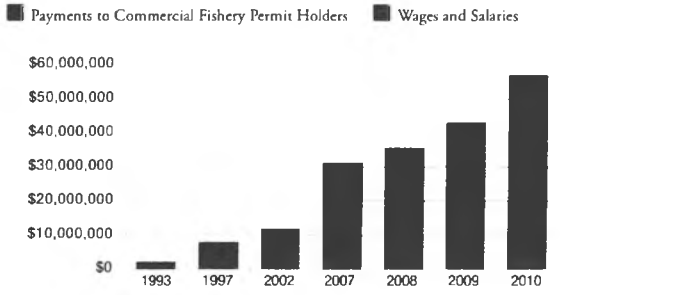
Aggregated Employment and Fishery Workforce[1]



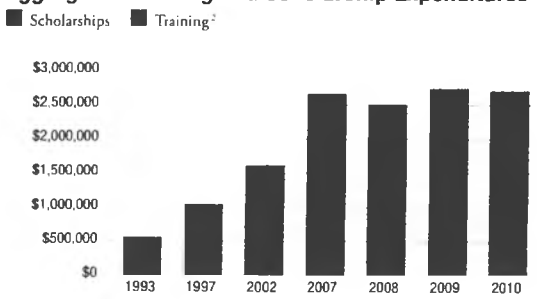
Aggregated Training and Scholarship Opportunities



Aggregated Wages, Salaries and Payments to Fishery Permit Holders



Aggregated Training and Scholarship Expenditures



[1] Total jobs for 2007-2010 reflect two methodological changes: wage and salary jobs are reported based on unique social security numbers of employees rather than on the number of jobs for which an individual may have been hired; the fishery workforce supported by the CDQ program (based on ex-vessel payments to permit holders) are included. [2] Training and scholarship opportunities and expenditures were reported in aggregate prior to 2007.



Industry Workforce Educational Needs Assessment

Report of the Seafood-Fisheries Summit

Rasmuson Foundation Office, Anchorage

16 December, 2011



UNIVERSITY
of ALASKA
Many Traditions One Alaska

Executive Summary

The December 16, 2011 Seafood Summit meeting convened by the Governor of Alaska, the Chair of the Rasmuson Foundation and the President of the University of Alaska marked an historic step in workforce development for the Alaskan seafood industry and related maritime sectors. The Summit provided an unprecedented opportunity for industry to inform the University, Government of Alaska and the Rasmuson Foundation about their workforce development challenges and needs. It was clear that current education and training systems do not adequately support industry requirements and that it is timely to reassess how those needs can best be met to sustain one of Alaska's leading industries.

Those concerns were embraced in the proposed action steps outlined by University President Gamble. Over the next year, the University shall:

- oversee an inventory of fisheries and maritime occupations
- complete an education and training gap analysis and establish priorities
- identify constraints and opportunities for education and training delivery
- develop an integrated and comprehensive action plan

Industry, Government and Foundation participants in the Summit endorsed this approach and have committed to work with President Gamble to to promote a more structured and aligned approach to workforce development.

Industry leaders agreed to identify senior staff to work with the University and committed to providing further information, as needed, to assist the work of the University.

The Rasmuson Foundation will continue to work directly with the University, the State of Alaska, with industry and with fishing communities to support the development of a capable and well trained workforce.

The Governor of Alaska offered assistance, through the Departments of Labor and Workforce Development and Fish and Game, with needs assessment and integration of statewide industry training programs; the Labor and Workforce Development Commissioner offered the resources of his department to support this work.

Overview

In October, 2011, Alaska Governor Sean Parnell, Ed Rasmuson, Chair of the Rasmuson Foundation Board, and Patrick Gamble, President of the University of Alaska, invited leading seafood industry executives to convene with senior government and university officials at the Rasmuson Foundation office in Anchorage to initiate a dialogue on workforce development. The Seafood-Fisheries Summit represented an historic gathering of industry, government and academc leaders and was the culmination of a significant investment in the fisheries sector by the Foundation and the University.

The Summit was intended to assist in the development of comprehensive educational opportunities for a responsive workforce that enables the fishing and seafood industries in Alaska to remain vibrant. Alaska's seafood industry workforce development requirements and University-based education programs are not yet in sync.

The major outcome envisaged from the Summit was to secure the commitment of major seafood employers to engage in a detailed industry workforce/education needs assessment.

Summit Preparations

In 2008, the Rasmuson Foundation initiated a five year, $5 million partnership with the University of Alaska Fairbanks, School of Fisheries and Ocean Sciences, to invigorate undergraduate fisheries education progams within the UA system. The initiative has been overseen by a Fisheries Excellence Committee comprised of representatives of the University, government, industry and the Rasmuson Foundation.

During the process of evaluating industry structure and directions, the Committee recognized that there are a diverse range of needs for education and workforce development, some of which overlap with the undergraduate fisheries initiative, but many that extend well beyond the current initiative. The Committee recommended a reassessment of strategic directions for workforce development to the University, to the Foundation and to industry and government partners.

In the lead up to the Summit, in June, 2011, University President Patrick Gamble appointed an 18 member Allied Fisheries Working Group. Allied Fisheries is a cross-campus University of Alaska collaborative initiative to assess and enhance the development and delivery of programs, courses, research and information that meet the employment needs of the fisheries, seafood and maritime industries.

The goals of the University of Alaska's Allied Fisheries initiative are:

• *To sustain and enhance the economy and the communities of Alaska by developing education and training that supports a responsive workforce enabling the fishing, seafood and maritime industries to stay vibrant and substantial contributors to the state.*

• *To support Alaskans, particularly young Alaskans, in discovering and preparing for the wide range of employment opportunities in the fishing, seafood and maritime industries.*

One of the first charges to the group by President Gamble was to *"identify and inventory existing UA institutional capacity for training and education that supports all aspects of the fishing business industries, fisheries support and fisheries development in Alaska."*

The Allied Fisheries Working Group broadened the inventory to include also the institutional capacity for training and education in support of the seafood and maritime industries. A copy of the inventory was distributed at the Summit and is available online at http://seagrant.uaf.edu/map/initiatives/marinescience/workforceplan/docs/alliedfishsum.pdf.

Summit Participation

The Summit was attended by nine top employer executives in the Alaska seafood and fisheries sectors, as well as the Governor of Alaska and commissioners from the Alaska State Department of Fish & Game and Labor & Workforce Development, and the President and two Chancellors from the University of Alaska (UAF and UAS). Participants are listed in Appendix A and represent a broad cross section of industry interests from both different regions of Alaska and different industry sectors.

Opening Discussion

During his welcoming remarks, Ed Rasmuson emphasized the importance of the seafood industry and maritime sector generally to Alaska. He noted that Alaska's fisheries industries are the State's largest private employer, providing more than 70,000 jobs in 2009. He observed that Alaska's fisheries cover a vast geographic area and demand a diverse range of skills – from technical to managerial, and that current training and education programs do not adequately address these needs – hence the need for this Summit and a greater engagement with industry. He noted that he and his father Elmer had a long history of engagement with Alaska's fisheries, including service on the North Pacific Fisheries Management Council. He reiterated that the Foundation wishes to continue to support a strong and sustainable fisheries sector.

Governor Parnell noted the local, national and increasingly global significance of Alaska's fisheries. During a recent visit to Europe he saw how valued our fisheries products are and heard how other nations view our fisheries management as a more sustainable approach. He noted that, in order to continue to reap the many benefits of this industry, there has to be excellent integration between communities, industry, government and academic interests. That integration can be achieved through better alignment of all training and workforce development activities.

UA President Patrick Gamble outlined the comprehensive approach being taken within the University of Alaska system to seafood industry education. Describing recent efforts to inventory UA program offerings related to seafood and fisheries/maritime sectors, he noted that many staff within the UA system were surprised by just how many programs UA already has in place. He emphasized his vision of Fisheries/Maritime programs having a "halo effect[1]" for the University overall. Using both the University's existing expertise in fisheries and ocean sciences, and building on its more fundamental education programs, the University of Alaska could become the global center for coldwater fisheries education.

Key Issues

a. **UA Working More Effectively with Industry**

Participants noted the importance of understanding how industry works and what its needs are when designing and developing training programs. They noted that while the University's array of training programs has "moved in the right direction" in recent years, and there is an emerging model of successful partnership in Bristol Bay, there have been some fundamental concerns about the University's operations. These included:

- high overhead rates
- advocacy against the industry at hearings
- lack of portability of University credits within the UA system
- lack of responsiveness to industry needs.

President Gamble assured participants that the University is determined to overcome these perception issues – this initiative is a manifestation of the University's desire to be more engaged and responsive to industry needs.

b. **It's All About the Fish**

[1] Halo Effect refers to the ability of a strategy (or leader) to synergize/motivate and market all related programs in a more positive light.

The sustainability of fisheries production in Alaska is fundamental to the future of the industry and therefore the future of the workforce. Various observations were made about factors that determine sustainability – from sound scientific management of stocks to the ability to reduce waste and better utilize resources. Participants appreciated the University's extensive research capacity and noted how many companies have made significant contributions to building that research over many years. However, they also noted that sustainability depends on a greater emphasis on understanding the businesses and communities that depend on fisheries and making a greater effort to understand their needs. This can range from promoting a more positive image of the fishing industry (promoting greater pride in fisheries as a career) to more fundamental changes in the harvesting and processing of fish to improve efficiency.

c. Youth Employment and Engagement

Participants agreed that one of the key challenges facing most coastal and rural communities is the lack of employment opportunities, particularly for youth. *"The best intervention is to put a kid to work"* was a widely endorsed sentiment. However, there was also considerable discussion about barriers to achieving greater youth employment. These included:

- Lack of youth understanding of opportunities in the seafood industry – it was frequently noted that engagement with youth on workforce opportunities is both limited and begins too late. There was strong support to market fishing and maritime careers more actively to teens and even pre-teens. Participants observed that activities such as the current UA National Ocean Sciences Bowl program held annually in Seward was a good way to promote greater youth engagement
- Seasonal limitations of fisheries
- Perception of fishing industry jobs as being low status and requiring mobility
- Drug and substance abuse among minors – it was observed that in some rural communities, it can be easier to buy drugs than milk. One particularly disturbing observation was that a minor consuming charge is permanent under Alaskan law and therefore limits subsequent lifelong employment in the fishing industry, while a murder citation could be expunged from an offender's record!

d. Beyond the Slime Line

One often cited issue faced by the fishing industry which acts as a major impediment to workforce recruitment is the lack of understanding of the industry. Many potential entrants to the workforce do not understand (a) the range of jobs available in the industry and/or (b) the potential for career progression beyond fish processing ("the slime line").

Industry representatives noted that part of this (mis)perception of opportunities derives from the lack of understanding about the stability and predictability of the industry. While catch volumes may vary from year-to-year, long-established operators provide a buffer to that volatility over time and offer increasingly diversified opportunities for career development. There is a dearth of readily-accessible information about the wider career opportunities available in the fisheries and related industries.

e. Beyond Biologists

Industry and government representatives noted that one of the biggest misconceptions in workforce development was the apparent over emphasis on scientific training. While many UA graduates have gone on to successful careers within government, research and academic organizations, these are not where the majority of workforce development needs exist. Participants proposed that greater attention be given to:

- Manufacturing sector jobs – it was observed that fisheries is one of Alaska's few true manufacturing sectors and that we have only just begun to explore the full range of value-added opportunities. More analysis would likely generate even greater opportunities for allied disciplines such as engineering, architecture, accounting, graphic design, marketing, etc.
- Maritime sector jobs – it was observed that there is much overlap in core skills between various sub-sectors of the seafood-fishing industries. Greater reengagement with the maritime sector would be beneficial in ensuring that industry can access skilled staff and in enabling greater mobility within the industry. Participants noted that this might be achieved through closer integration with AVTEC and the Statewide Career and Technical Education Plan (Dept. Labor)
- Aquaculture skills – while aquaculture forms a relatively small part of the overall sector and employment market currently, there are emerging needs for greater aquaculture skills. Employers noted that the introduction of skills from recent employees who are graduates of aquaculture programs in Chile, Canada and Norway has been beneficial in improving business efficiency
- Career pathways – updating our understanding of current and emerging career pathways and providing a more aligned training structure would be very helpful – we currently have an inadequate map of career options to guide prospective entrants and to communicate about the value of a fisheries/maritime career.

f. Telling our Story Better

Underpinning much of the discusison was a recogntion that neither the industry, nor the University has given enough attention to sharing the Alaska fisheries story. While there were some good examples cited of how changes in the fishing industry have made a big difference to coastal communities (e.g. introduction of CDQs) there is a strong sense that more needs to be done. Suggestions ranged from more frequent industry-Universiity interaction to development of career promotion materials to better marketing of safe seafood production and how it underpins the Alaska seafood brand.

Next Steps

The Summit provided an unprecedented opportunity for industry to inform the University, Government of Alaska and the Rasmuson Foundation about their workforce development challenges and needs. It was clear that current education and training systems do not adequately support industry requirements and that it is timely to reassess how those needs can best be met to sustain one of Alaska's leading industries.

Those concerns were embraced in the proposed action steps outlined by University President Gamble. Over the next year, the University shall:

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Appendix: Summit Participants

Hosts:

The Honorable Sean Parnell, Governor, State of Alaska

Mr. Patrick Gamble, President, University of Alaska

Mr. Edward Rasmuson, Chairman, Rasmuson Foundation

Participants:

Mr. Ragnar Alstrom, Executive Director, Yukon Delta Fisheries Development Association

Mr. Joe Bundrant, Chair, Trident Seafoods Corp.

The Honorable Click Bishop, Commissioner, Alaska Department of Labor & Workforce Development

The Honorable Cora Campbell, Commissioner, Alaska Department of Fish & Game

Mr. Barry Collier, President & CEO, Peter Pan Seafoods, Inc.

Mr. Larry Cotter, CEO, Aleutian Pribilof Island Community Development Association

Mr. Morgen Crow, Executive Director, Coastal Villages Region Fund

Mr. Dennis Guhlke, CEO, Icicle Seafoods, Inc.

Ms. Diane Kaplan, President & CEO, Rasmuson Foundation

Mr. Mark Palmer, President & CEO, Ocean Beauty Seafoods LLC

Mr. John Pugh, Chancellor, University of Alaska Southeast

Mr. Brian Rogers, Chancellor, University of Alaska Fairbanks

Mr. Robin Samuelsen, President & CEO, Bristol Bay Economic Development Corporation

Mr. Terry Shaff, President and CEO, UniSea, Inc.

Observers:

Mr. Ian Dutton, Vice President, Rasmuson Foundation

Mr. Jeffrey Jones, Special Staff Assistant, Office of the Governor

Ms. Beth Leschper, Communications Director, Dept. Labor & Workforce Development

Mr. Jordan Marshall, Initiatives & Special Projects Manager, Rasmuson Foundation

Mr. Trevor McCabe, Chief Operating Officer, Coastal Villages Region Fund

Mr. Mark Myers, Vice Chancellor for Research Services, University of Alaska

Mr. Frederick Villa, Associate Vice President, Workforce Programs, University of Alaska

Invitees Unable to Attend:

Mr. Inge Andreassen, President American Seafoods

Ms. Janice Ivanoff, President & CEO Norton Sound Economic Development Corporation

Mr. Phillip Lestenkof, President Central Bering Sea Fishermen's Association

Mr. Jeff Trandahl, Executive Director National Fish and Wildlife Foundation

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STATE OF ALASKA

Commercial Fisheries Entry Commission

SEAN PARNELL, GOVERNOR

8800 Glacier Hwy., #109
P.O. Box 110302
Juneau, AK 99811-0302

(907) 789-6150 Licensing Calls
(907) 789-6160 Other Business
(907) 789-6170 Fax

INTERNET: www.cfec.state.ak.us

MEMORANDUM

To:	Representative Steve Thompson Chairman, House Special Committee on Fisheries	Date:	14 February 2012
		Telephone:	(907) 790-6942 voice (907) 790-7042 facsimile
From:	Benjamin Brown, Commissioner Commercial Fisheries Entry Commission (CFEC)	Subject:	fishing activity of nonresident, migrated permits

At the House Special Committee on Fisheries hearing on House Concurrent Resolution 18 on Thursday the 9th of February 2012 Representative Herron expressed interest in knowing about the level of fishing activity of limited entry permits that have migrated Outside.

Please find attached two tables prepared by CFEC's Research & Planning staff. Members of the Fisheries Committee were provided with copies of the Executive Summary of the report entitled 'Changes in the Distribution of Alaska's Commercial Fisheries Entry Permits, 1975 – 2010' in advance of the hearing on HCR 18. In the Executive Summary on Table 2 on page 5 statistics about migration of permits show the historical incidence of permit migration. CFEC staff have in the attached tables set out side-by-side the total number of permits held by nonresidents, the number of nonresidents attributed to migration, the number of nonresident, migrated permits fished in a given year, and the total number of nonresident permits fished in the year. The first table considers all limited entry permits held by nonresidents, while the second table considers only Bristol Bay salmon drift and set gillnet permits.

We hope this information is helpful to the Fisheries Committee as it continues its work on HCR 18. Please let me know if we may provide any further information in response to the issue raised by Representative Herron. Thank you.

The Number of Alaska Limited Entry Permits Held by Nonresidents With the Number of Permits Attributed to Migration

Year	Total Permits Held by Nonresidents	Nonresident Permits Attributed to Migration	Nonresident & Migrated Permits Fished in the Year	Total Nonresident Permits Fished in the Year
1975	1,955	0	0	1,358
1976	2,063	24	15	1,704
1977	2,139	72	54	1,750
1978	2,258	156	136	2,014
1979	2,308	184	158	2,068
1980	2,331	195	153	2,086
1981	2,342	214	180	2,151
1982	2,416	227	202	2,241
1983	2,500	224	198	2,244
1984	2,565	253	204	2,288
1985	2,568	267	227	2,304
1986	2,583	302	257	2,330
1987	2,612	334	273	2,354
1988	2,710	373	314	2,458
1989	2,777	437	302	2,179
1990	2,878	467	381	2,540
1991	2,912	497	408	2,598
1992	2,960	497	401	2,576
1993	2,987	530	407	2,564
1994	3,021	540	402	2,551
1995	3,050	557	419	2,596
1996	3,119	559	391	2,545
1997	3,144	566	419	2,590
1998	3,194	566	390	2,501
1999	3,193	575	381	2,430
2000	3,217	605	389	2,426
2001	3,348	614	368	2,251
2002	3,393	632	312	1,870
2003	3,367	622	333	2,001
2004	3,348	623	340	2,028
2005	3,373	600	351	2,133
2006	3,365	590	312	2,031
2007	3,375	593	328	2,096
2008	3,336	563	322	2,116
2009	3,396	603	351	2,195
2010	3,347	560	315	2,178

Notes:

These figures are derived from CFEC permit transfer and permit renewal data.

Permit counts represent an end-of-year snapshot. Only Alaska limited entry permits are counted.

Migration represents the change from Alaska residency to residency outside of Alaska.

Migrated permits are based upon the most recent action on the permit. A "migrated" permit retains that status until it is transferred or migrates elsewhere.

"Permits fished" are permits used to record at least one commercial landing in the year, and may have been made by someone else other than the end-of-year permit holder.

The Number of Bristol Bay Salmon Drift and Set Gillnet Limited Entry Permits Held by Nonresidents With the Number of Permits Attributed to Migration

Year	Total Permits Held by Nonresidents	Nonresident Permits Attributed to Migration	Nonresident & Migrated Permits Fished in the Year	Total Nonresident Permits Fished in the Year
1975	773	0	0	537
1976	843	4	2	714
1977	872	16	10	705
1978	912	24	19	823
1979	934	36	29	889
1980	951	44	38	926
1981	967	48	44	945
1982	986	54	50	966
1983	963	53	51	951
1984	988	61	59	979
1985	989	57	54	972
1986	991	63	60	971
1987	1,008	64	62	994
1988	1,028	71	70	1,022
1989	1,059	90	88	1,048
1990	1,074	103	101	1,062
1991	1,103	116	112	1,086
1992	1,129	117	114	1,117
1993	1,153	129	126	1,138
1994	1,166	129	124	1,144
1995	1,171	127	127	1,156
1996	1,183	129	127	1,161
1997	1,195	133	129	1,165
1998	1,200	129	123	1,162
1999	1,224	131	127	1,181
2000	1,224	138	132	1,175
2001	1,208	133	115	1,006
2002	1,227	134	96	815
2003	1,243	133	119	966
2004	1,253	149	128	995
2005	1,279	151	133	1,027
2006	1,287	150	128	1,053
2007	1,300	154	130	1,050
2008	1,303	142	121	1,052
2009	1,331	151	132	1,075
2010	1,326	135	121	1,096

Notes:

These figures are derived from CFEC permit transfer and permit renewal data.

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"Permits fished" are permits used to record at least one commercial landing in the year, and may have been made by someone else other than the end-of-year permit holder.

DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
Division of Business Partnerships
Training Grants Supporting the Seafood Industry
FY 2007 - FY 2012

FISCAL YEAR	TRAINING PROVIDER	TRAINING DESCRIPTION	GRANT AMOUNT	# OF PEOPLE SERVED
FY12	Copper River Seafoods	Seafoof Processing Register Apprenticeship Training, Quality Improvement & Train the Trainer Training.	$181,521 /a	112 / a
FY12	Copper River Seafoods	Construction Equipment Mechanic and Mechanical Industrial Repair apprenticeship training.	$110,939 /a	10 / a
FY 12	Yukon Delta Fisheries Development Association	YDFDA established a Youth Employment Project (YEP) providing employment opportunities through their Kwik'Pak Fishery located in the Wade Hampton Census area. The YEP provides work opportunity in the seafood harvesting and processing industry for six villages within the area. Youth are employed in all stages of the fishery operation from administrative and marketing to processing and shipment of Yukon River Salmon.	$150,000/a	100 / a
FY10	Westward Seafoods	8-hour Refresher & 24-hour Hazwopper Intial training	$5,960	28
FY09	Ocean Beauty Seafoods	Machinist Apprenticeship Training - Electrical, Welding & Refrideration	$80,000	10
FY08	University of Alaska Fairbanks Office of Sponsored Programs; Marine Advisory Program	Mangement Training for Seafood Industry mangers in technical & managerial aspects of operating seafood plants. STEP provided support service to attend training.	$165,393	20
FY07	Ocean Beauty Seafoods	Seafood Processing Baader Machine Skills training in Skinning, Heading & Gutting, Filleting, Meat Separtor & 24 hour Hazwopper.	$56,450	16
FY07	Employment Security Division	Salmon Fisheries National Emergency Grant to provide training for displaced fishermen.	$197,808	98 / b
			$948,071	394

FOOTNOTE

a Amounts are the grant budget and planned number of participants to be served.
b Trained displaced industry workers for occupations outside of seafood harvesting and processing.

Prepared by the Alaska Department of Labor and Workforce Development, Division of Business Partnerships February 6, 2012

DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
Division of Business Partnerships
ITA Participants Employed Into The Seafood Industry
FY 2007 - FY 2012

FISCAL YEAR	LOCATION	OCCUPATIONAL GROUP	ITA AMOUNT	# OF PEOPLE SERVED
FY12		N/A		
FY11	Anchorage Muldoon Job Center	Fishers and Related Fishing Workers	$554	4
FY 10			$0	0 a
FY 09	Anchorage Muldoon Job Center	Fishers and Related Fishing Workers	$3,186	2
FY 09	Peninsula Job Center	Fishers and Related Fishing Workers	$2,493	6
FY 09	UAA Kachemak Bay Campus	Fishers and Related Fishing Workers	$665	2
FY 08				0 a
FY 07	Ketchikan Job Center	Fishers and Related Fishing Workers	$1,240	4
FY 07	UAA Kachemak Bay Campus	Fishers and Related Fishing Workers	$25	1
		Total	$8,163 b	19

FOOTNOTE

a no participants in FY 2008 or FY 2010

b ITA amounts include costs for training costs of tuition and fees, and support services such as housing/lodging while attending training.

Prepared by the Alaska Department of Labor and Workforce Development, Division of Business Partnerships February 6, 2012

House Special Committee on Fisheries
February 9, 2012
House Concurrent Resolution 18—Commercial Fisheries Programs

Order of Presenters:

1. Introducing the Resolution:
   Tim Clark, Staff to Rep. Edgmon, on loan to the Fisheries Committee
2. Speaking on the University of Alaska's Allied Fisheries Working Group:
   - Michael Castellini, Dean of the School of Fisheries and Ocean Sciences
   - Fred Villa, Associate Vice President, Workforce Programs
3. Speaking on State Programs through Dept. of Commerce:
   - Wanetta Ayers, Director of the Division of Economic Development
4. Speaking on the Community Development Quota Program
   - Aggie Blandford, Executive Director of the Western Alaska Community Development Association

6:00 pm
9:30 am Now

Tues 14th

- Yukon River Fisheries Drainage -

14 - to FAI

Potential Witnesses from the Division of Economic Development

a. Wanetta Ayers—Director
b. Kevin O'Sullivan— Commercial Seafood Development Specialist
c. Cathy Jeans—Head of Financial Section (Commercial Fishing Revolving Loan Fund)

Glenn Haight -

Alaska Seagrant's Marine Advisory Program

The activities through Alaska Sea Grant's Marine Advisory Program (MAP) parallel the goals of HCR 18 more closely than any other endeavor in the state. MAP's Young Fishermen's Summit speaks for itself as an ongoing effort to help younger Alaskans get into commercial fisheries on an ownership level. Other MAP programs include:

- **Fishbiz: Alaska Fisheries Business Assistance Project**

  Providing information and resources to Alaska's fishermen, processors, and marine-related businesses

  The Alaska Fisheries Business Assistance Project, **Fishbiz,** is a seafood business training and educational program for Alaska's seafood industry participants and dependent coastal communities. Fishbiz services focus on education, research and extension.

  Fishbiz offers educational workshops, seminars, manuals and industry updates.

Publications through Fishbiz include:

- **Financial Statements and Business Calculations for Commercial Fishermen & Alaska Fish Business Plan**
- **The Business of Fishing: Managing Finances**
- **Understanding Salmon Markets**
- **And much more…**

Fishbiz workshops have included:

- **Fishermen Direct Marketing workshop**
- **Introduction to Financial Management**
- **Financial Management for Alaska Shellfish Farmers**
- **And many more…**

For more about Fishbiz: http://seagrant.uaf.edu/map/fishbiz/index.php

The Program's MAP Agents

"Around the state, the Marine Advisory Program operates offices in 10 coastal communities, providing seafood industry workforce training, marine science K–12 education, and small business development, as well as conducting collaborative research on marine mammals, seafood quality, shellfish aquaculture and other community-defined priority issues."

For more about MAP Agents:
http://seagrant.uaf.edu/map/admin/fundinarequest/information/handouts/mapactivities.pdf

Potential Witness from the Marine Advisory Program:

- Paula Cullenberg, Program Leader, will be in Juneau with the Young Fishermen's Summit. The most logical sequence would be for Paula to give an **overview of the Marine Advisory Program** at the same meeting (February 14th) at which the Young Fishermen will participate (Paula going first, followed by the Young Fishers).

Western Alaska Community Development Association (WACDA)

Some background from WACDA's 2010 annual report:

"In 1992 the North Pacific Fishery Management Council established the Community Development Quota (CDQ) program as a means to address high unemployment and limited economic opportunity in coastal Western Alaska. Designed to give these communities access to the fisheries off their coasts, the CDQ program has grown and flourished to become one of the most successful rural development initiatives undertaken in Alaska and, indeed, the nation.

"The CDQ program does not depend on direct government funding for its programs and activities; rather, the six nonprofit groups that make up the program are sustained by their ability to harvest a small percentage of the fishery resources of the Bering Sea. The program-wide allocation of roughly 10 percent of many of the Bering Sea's harvestable fish stocks has made a tremendous impact on the 27,000 residents who inhabit the 65 western Alaska coastal communities included in the program. In working to fulfill their mission, CDQ groups have created jobs, infrastructure and opportunity in some of the nation's most geographically isolated and economically depressed communities.

"The Western Alaska Community Development Association (WACDA) is the umbrella organization and governing panel for the CDQ program. A nonprofit organization authorized by amendments to the Magnuson-Stevens Fishery Conservation and Management Act in 2006, WACDA serves as the trade association for the six individual entities that are responsible for implementing the CDQ program. These six entities represent geographic regions along the Bering Sea coast and are (from south to north) Aleutian Pribilof Island Community Development Association, Central Bering Sea Fishermen's Association, Bristol Bay Economic Development Corporation, Coastal Villages Region Fund, Yukon Delta Fisheries Development Association, and Norton Sound Economic Development Corporation."

Many of CDQ groups have made efforts to increase the number of entry permit holders in their communities. I have spoken with WACDA Executive Director Aggie Blandford, and if called upon she is willing to testify before the the committee on how her member organizations' efforts mesh with HCR 18.

(For WACDA's 2010 Annual Report:
http://www.wacda.org/media/pdf/SMR_2010.pdf)

Potential Witness from the Western Alaska Community Development Association:

- Aggie Blandford, Executive Director, WACDA

ALLIED FISHERIES: University of Alaska Partnership with the Fisheries, Seafood, and Maritime Industries

"In June 2011, University of Alaska President Patrick Gamble appointed a **UA Allied Fisheries Working Group** to support the creation of an integrated plan that prepares Alaskans through education and training to engage in the business, management and workforce opportunities in the fisheries, seafood and maritime industries. The fisheries, seafood, and maritime industries are among the largest private employers in Alaska and contribute to

the economies of many of Alaska's rural and urban communities. Although the University of Alaska offers various programs and courses that are useful to these industries, UA has no identifier or coordinated process to link these programs. To better serve the workforce development and training needs of this important sector, UA has launched a system-wide initiative to coordinate programs and course offerings and to fill gaps in current offerings.

"***Allied Fisheries*** is a cross-campus University of Alaska collaborative initiative to assess and enhance the development and delivery of programs, courses, research and information that meet the employment needs of the fisheries, seafood and maritime industries.

"The goals of the University of Alaska's Allied Fisheries initiative are:

- **To sustain and enhance the economy and the communities of Alaska** by developing education and training that supports a responsive workforce enabling the fishing, seafood and maritime industries to stay vibrant and substantial contributors to the state.
- **To support Alaskans,** particularly young Alaskans, in discovering and preparing for the wide range of employment opportunities in the fishing, seafood and maritime industries."

For the latest on the initiative, go to
http://seagrant.uaf.edu/map/initiatives/marinescience/workforceplan/docs/summitreport.pdf

Many of the goals of the Allied Fisheries Initiative are relevant to HCR 18 aims. I am in the process of contacting the Marine Advisory Program's Paula Cullenberg for her recommendation on who from the initiative to bring before the committee.

Potential Witness from the Allied Fisheries Initiative:

- Paula Cullenberg will speak with the initiative's work group leadership team to determine who from the initiative will deliver testimony to the committee.

The Department of Labor and Workforce Development/Alaska Workforce Investment Board

The Alaska Workforce Investment Board (AWIB) lists the seafood industry as one of eight priority industries in the state. But it has never created a workforce development plan for seafood harvesters or the processing or maritime industries. There is very little evidence that the Department of Labor or the Workforce Investment Board has expended much effort on strategies for preparing Alaskan for fish harvesting careers. A representative of AWIB should come before the committee to explain what has impeded the board from creating a strategy for one of the most important industries in the state. Now that the Dept. of Labor is apparently supporting the creation of a plan (according to Click Bishop at the December meeting of the Allied Fisheries group), they can describe how that development might come about.

http://labor.alaska.gov/bp/forms/WIA-strategic-plan2011.pdf

Potential Witness from the Workforce Investment Board:

- Jeff Selvey, Executive Director, or perhaps Deputy Dept. of Labor Commissioner Greg Cashen, who until recently headed AWIB.

Jane Pierson

From: Timothy Clark
Sent: Tuesday, January 24, 2012 4:42 PM
To: Jane Pierson
Subject: Material for Our HCR 18 Meeting on Friday

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Jane,

The organizations below are the folks I've been in touch with about coming before the committee on HCR 18. We can discuss all this on Friday.

Tim

Possible Agenda Items for HCR 18—The Graying of the Fleet

HCR 18 recognizes there are many fine programs and agencies in the state whose goals include promoting strong resident commercial fisheries and aiding younger Alaskans' success in commercial fisheries. The resolution aims not only to bring attention to existing efforts but also to strengthen their effectiveness in helping young Alaskans surmount the growing barriers to owning viable commercial fishing businesses.

The Division of Economic Development

HCR 18 focuses on two of the most effective tools state government can employ to foster economic development: Financing and Education. Within the Division of Economic Development, the state of Alaska's financing program to foster commercial fisheries businesses is the Commercial Fishing Revolving Loan Fund (CFRLF). This was established in 1972, at the same time that the state's salmon fisheries transitioned to a limited entry management system. Its declaration of policy affirms, "It is the policy of the state...to promote the rehabilitation of the state's fisheries, the development of a predominantly resident fishery, and the continued maintenance of commercial fishing gear and vessels throughout the state by means of long-term, low interest loans." (AS 16.10.300)
(See attached pages for overviews of loan programs within the CFRLF:



DCCED CFRLF Limited Entry Permit Loans.htm



DCCED CFRLF Vessel Purchase Loans.htm



DCCED CFRLF Vessel Upgrade or Gear Purchase Loans.htm



DCCED CFRLF Product Quality Improvement Loans.mht



DCCED CFRLF Quota Share Loans.htm

The Division of Economic Development is also home to the Office of Fisheries Development. Headed by Kevin O'Sullivan, this office supplies links to many resources in the state for not only commercial fish harvesting but also fish marketing and the processing industry.

The Fisheries Development web pages: http://www.dced.state.ak.us/ded/dev/seafood/seafood.cfm

Possible Amendments to the Resolution?

During my Interim conversations with some of the people mentioned above, as well as during conversations with Rep. Edgmon, the topic of possible amendments to the bill have come up. Members of the Fisheries Committee may want to consider "firming up" the resolves in the resolution in some way that would call for a more concrete and specific action taken by the Legislature. At the same, if possible, we should keep in mind that a resolve that calls for action that has a price tag attached will result in a Finance Committee referral for the bill. This might be something to avoid.

Some examples of possible amendments:

- Paula Cullenberg of the MAP program suggested that perhaps the Legislature should call for a study to be carried out (by McDowell or perhaps ISER) to identify and measure the impediments that younger people face in their efforts to launch ownership-level fish harvesting businesses. This, of course, would cost money.
- The FSH Committee could call upon the Legislature to become more actively involved (assigning a legislator or two) with the University's Allied Fisheries Initiative, even if just in an Observer capacity as the initiative working group continues to refine its goals and action plan. (This may or may not be interpreted as carrying a price tag.)

– 2/14

WACDA

WESTERN ALASKA COMMUNITY DEVELOPMENT ASSOCIATION

TWENTY 10

Western Alaska Community Development Quota Program













Preserving heritage. Sustaining communities. Providing opportunities.

ELIGIBLE COMMUNITIES AND CDQ ENTITIES

Western Alaska Community Development Quota Program



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WACDA
WESTERN ALASKA COMMUNITY DEVELOPMENT ASSOCIATION

APICDA
Haginaa Kidul - Helping to Grow



PROVIDING OPPORTUNITIES
BBEDC
"ACCEPT THE CHALLENGE"

CBSA
SAINT PAUL

COASTAL VILLAGES
WORK FISH HOPE

NSEDC



ABOUT THE COMMUNITY DEVELOPMENT QUOTA PROGRAM

In coastal Western Alaska, 65 communities look out upon the Bering Sea—an expanse of the North Pacific Ocean whose waters hold some of the healthiest and most valuable fish stocks in the world. Despite this proximity, for many years lack of infrastructure and opportunity meant that the residents of this region could only watch as the wealth generated by these fisheries accrued elsewhere.

This began to change in 1992 when the North Pacific Fishery Management Council established the Community Development Quota (CDQ) program as a means to address high unemployment and limited economic opportunity in coastal Western Alaska. Designed to give these communities access to the fisheries off their coasts, the CDQ program has grown and flourished to become one of the most successful rural development initiatives undertaken in Alaska and, indeed, the nation.

The CDQ program does not depend on direct government funding for its programs and activities; rather, the six nonprofit groups that make up the program are sustained by their ability to harvest a small percentage of the fishery resources of the Bering Sea. The program-wide allocation of roughly 10 percent of many of the Bering Sea's harvestable fish stocks has made a tremendous impact on the 27,000 residents who inhabit the 65 western Alaska coastal communities included in the program. In working to fulfill their mission, CDQ groups have created jobs, infrastructure and opportunity in some of the nation's most geographically isolated and economically depressed communities.

The Western Alaska Community Development Association (WACDA), the author of this report, is the umbrella organization and governing panel for the CDQ program. A nonprofit organization authorized by amendments to the Magnuson-Stevens Fishery Conservation and Management Act in 2006, WACDA serves as the trade association for the six individual entities that are responsible for implementing the CDQ program. These six entities represent geographic regions along the Bering Sea coast and are (from south to north) Aleutian Pribilof Island Community Development Association, Central Bering Sea Fishermen's Association, Bristol Bay Economic Development Corporation, Coastal Villages Region Fund, Yukon Delta Fisheries Development Association, and Norton Sound Economic Development Corporation.

The revenue largely earned through the harvest of species such as pollock, crab and halibut have funded critical infrastructure, the development of local fisheries, training and scholarship programs, grant programs and social services in CDQ member communities. The program has enabled residents of Western Alaska to gain employment on the vessels that fish CDQ quotas, in local fish plants built with the support of harvest revenues and in myriad other jobs associated with and supported by the CDQ program. In the 18 years between the program's inception and 2010, more than $345 million has been generated in direct wages, payments to resident fishermen, scholarships and training benefits. In 2010 alone, the six CDQ groups invested more than $251 million in their communities and in fisheries activities.

The accomplishments realized by the six CDQ nonprofit entities that make up the Western Alaska Community Development Association over those 18 years speak to the overwhelming success of the program. Yet for all the achievements, there is still much work to be done.

Ever-increasing fuel prices in CDQ communities, that can be as much as triple the national average, threaten to put a chokehold on economic development. Heavily dependent on diesel fuel-fed power systems, escalating fuel costs directly drive increases in energy expenses. Additionally, many of these communities are the first to see the impacts of a changing climate as they watch the ground under their feet literally disappear due to the effects of coastal erosion. This requires costly responses, whether it be work to shore up a stretch of coastline or a river bank, or, more drastically, relocation efforts to higher ground. And while the CDQ groups continue to create jobs and employment opportunities, bringing down the unemployment rate in the region remains a challenge.

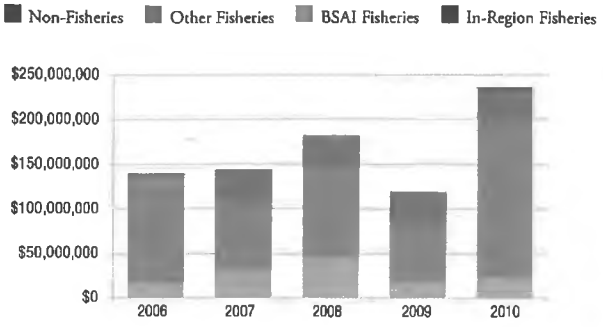
This report highlights the work of WACDA and the individual CDQ groups as they continue to address the challenges faced by their communities. The following pages illustrate how CDQ efforts and investments are helping to fulfill the statutory mandate of the program to provide eligible villages with an opportunity to participate and invest in Bering Sea fisheries, support economic development in the region, alleviate poverty, provide economic and social benefits to Western Alaska residents, and achieve sustainable and diversified local economies.

THE CDQ PROGRAM: A MODEL FOR SUSTAINABLE COMMUNITIES

Investments in Economic Capital

In pursuit of the purposes of the Western Alaska Community Development Quota program to develop sustainable, fisheries-based economies in 65 western Alaska villages, the six CDQ entities made economic investments totaling nearly $235 million in 2010. All of these investments are categorized as fisheries-related investments as defined in the Magnuson-Stevens Fishery Conservation and Management Act. Since 2006, the program also allows for nonfisheries-related investments, which are limited to 20 percent of total investments.

Aggregated Economic Investments

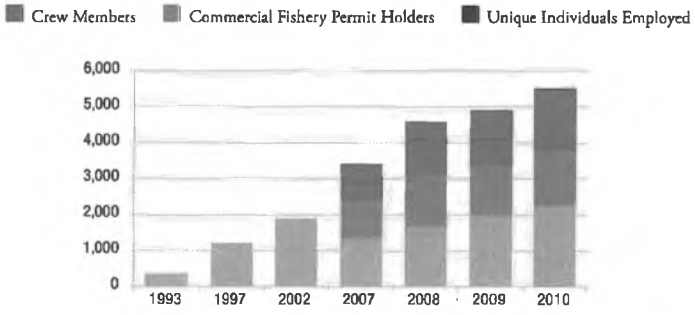


Investments in Human Capital

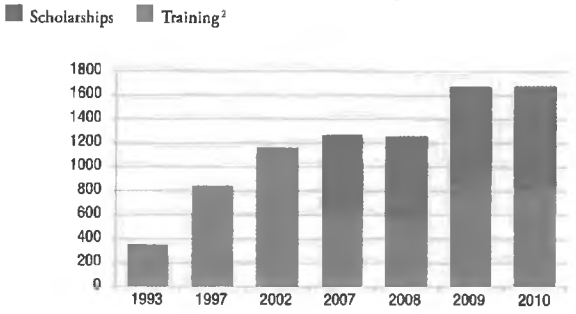
Each CDQ entity provides training and scholarship opportunities to prepare residents in eligible communities for job opportunities, skill development and career advancement. In 2010, the six CDQ entities granted more than 850 scholarships totaling a combined human capital investment of over $2 million. Combined training investments exceeded $660,000 for the year, providing more than 825 training and skill development opportunities to eligible residents.

In 2010, the six CDQ entities provided wage and salary jobs to nearly 2,300 individuals. Total combined payroll for the year exceeded $32.4 million. CDQ processors, fish-buying stations, and other fisheries businesses paid ex-vessel payments in excess of $24.7 million to more than 1,500 fishery permit holders in western Alaska. In turn, those permit holders supported an estimated 1,700 crewmember jobs.

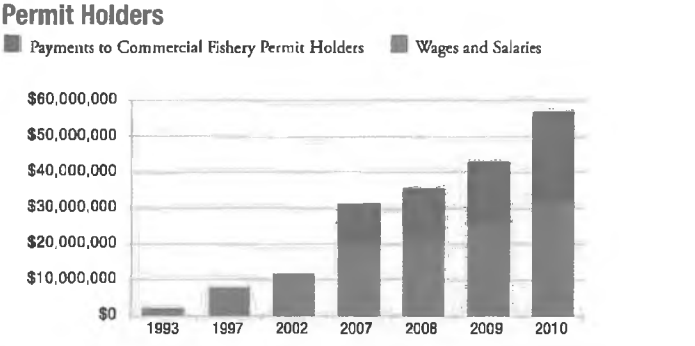
Aggregated Employment and Fishery Workforce[1]



Aggregated Training and Scholarship Opportunities



Aggregated Wages, Salaries and Payments to Fishery Permit Holders



Aggregated Training and Scholarship Expenditures



[1] Total jobs for 2007-2010 reflect two methodological changes: wage and salary jobs are reported based on unique social security numbers of employees rather than on the number of jobs for which an individual may have been hired; the fishery workforce supported by the CDQ program (based on ex-vessel payments to permit holders) are included. [2] Training and scholarship opportunities and expenditures were reported in aggregate prior to 2007.

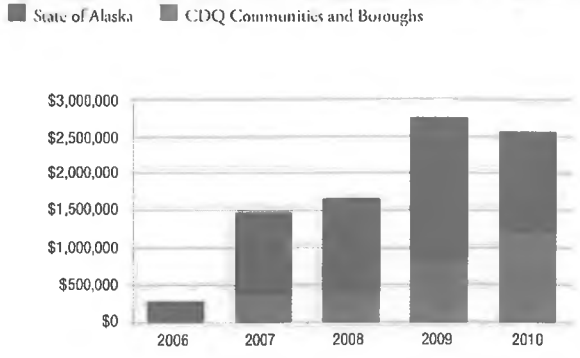


Investments in Community Capital

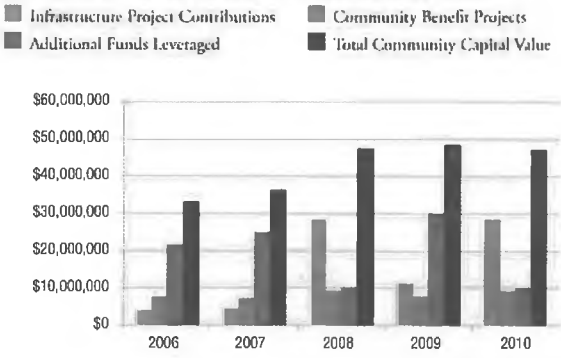
The six CDQ entities partner with state, federal and local governments as well as other regional organizations to leverage available funding for community capital investments that increase eligible communities' capacity to govern, provide basic services, and improve living standards in Western Alaska. Community capital investments take many forms including seed, matching or completion grants to municipal governments, tribal entities and NGOs in CDQ villages for infrastructure projects, facilities, municipal government and NGO operations, equipment, environmental programs and projects, and educational programs and support.

In 2010, the six CDQ entities provided nearly $8.9 million toward community infrastructure projects and over $7.5 million in community benefit projects. These investments leveraged an additional $3.4 million from other sources, bringing the total value of community capital investments to approximately $19.9 million for the year.

Aggregated Fees and Taxes Paid to State and Local Government



Aggregated Community Capital Investments







ALEUTIAN PRIBILOF ISLAND COMMUNITY DEVELOPMENT ASSOCIATION



APICDA
Haglnaa Kidul · Helping to Grow



APICDA dedicated land next to the Uglulax Lodge in Nikolski for this geodesic greenhouse, shown prior to planting. In exchange for routine maintenance, the lodge receives growing space in the greenhouse. With assistance from APICDA, the City of False Pass installed a 2.4 kilowatt wind turbine to help offset some of the electricity costs incurred by the City office and recreation center.

"Not only will atomic power be released, but someday we will harness the rise and fall of the tides and imprison the rays of the sun." —Thomas A. Edison

With no road access, living as much as 1,000 miles from the nearest store or fuel source has significant consequences when one of the two barges transporting the community's annual fuel delivery doesn't show up as expected. In late 2000, this was an all too familiar situation for the Aleutian Pribilof Island Community Development Association (APICDA) communities of Akutan, Atka, False Pass, Nelson Lagoon, Nikolski, and Saint George.

The missed fuel delivery spurred emergency fuel conservation measures undertaken by these communities and their residents. With today's rising fuel prices, many residents are still compelled to take drastic measures, often forced to choose between "heat and eat" just to make it day to day.

To help alleviate this situation, APICDA has joined forces with other "A-Team" members in support of its goal to make energy for member communities "accessible, sustainable, reliable, and affordable." APICDA sees this as part of its mission to increase community influence over individual economic and social destinies and to promote economic growth in the communities by providing for a higher standard of living and a reduction in social problems.

The A-Team is a group of Aleutian organizations, which in addition to APICDA, includes the Aleut Corporation, the Aleutian Housing Authority, the Aleutian Pribilof Islands Association (APIA), the Aleutians East Borough, and the Eastern Aleutian Tribes.

"We are trying to lead our communities to economic self-sufficiency. Energy security is one piece of this puzzle; we are able to do this because of the CDQ program. Through our investments in the Bering Sea, we can develop programs for our residents, helping lead them to a more stable environment, not just for the short term, but ideally for the long term," explains APICDA's Everette Anderson.

Leading their communities to energy self-sufficiency through the use of alternative energy has been a highly collaborative effort by APICDA and the A-Team. APICDA initiated its focus on energy issues by purchasing and installing three residential wind turbine units; one is located at the Akutan city library, another at the False Pass city office, with the third wind turbine installed at the Nelson Lagoon Storage Company.

The A-Team is focusing on three primary areas to provide its members with energy that is more accessible, sustainable, reliable, and affordable: 1) conservation and weatherization; 2) the use of renewable energy within each of the communities; and 3) exploring bulk fuel options.

Conservation and weatherization is an ongoing process in which community members are encouraged to use energy efficient light bulbs and to winterize their homes, for example. Bulk fuel delivery options are being explored, such as a bulk fuel cooperative, purchasing fuel at discounted rates, and ensuring that communities are guaranteed fuel deliveries.

The primary focus of the A-Team has been to establish a renewable energy project in each of its communities that takes advantage of the area's resources. The Aleutian chain is unique with its resources of wind, fire, and water. Wind projects are operating in Nikolski, False Pass, and St. Paul, with more proposed in the future. The Aleutians have excellent wind power potential, with winds in the area rated as Class 7, the highest rating for successful wind generation projects.

With financial assistance from APICDA, along with the efforts of APIA, Nikolski's 65-kilowatt wind turbine began operating about a year ago. It operates in conjunction with the community's diesel generation plant. Preliminary findings indicate Nikolski may cut its diesel use by 50 percent with the addition of the wind turbine, resulting in an annual savings of more than 15,000 gallons of fuel.

There is potential on almost all of the Aleutian Islands for hydropower. A hydro project is expected to be up and running in Atka in the spring of 2012. Once online, the community will be able to turn off its diesel-powered generators and the hydro plant will help to power APICDA's Atka Pride Seafood's fish processing plant with low cost electricity. A second hydro facility is slated for King Cove to be completed in the summer of 2012, doubling the area's energy capacity, providing extra energy for home heating, with additional energy available for the community's fish plant.

Geothermal energy in Akutan and tidal/ocean current energy in False Pass are still in the exploratory phases, but the area is ripe for these alternative energy opportunities. Several more emerging technology abstracts have been submitted for review by the Alaska Energy Authority.

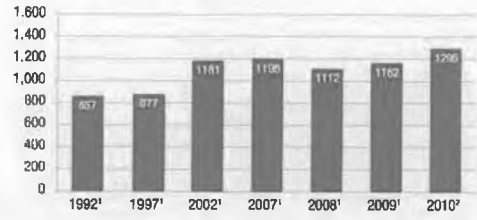
Food is energy too—and it is increasingly becoming a concern for Aleutian communities. The remote communities of Alaska are extremely vulnerable to supply disruptions in food delivery. Locally grown food in greenhouses powered by alternative energy has become an adjunct to the initial energy project taken on by the A-Team. Nikolski is now in its third year operating its 24-foot diameter solar powered geodesic dome greenhouse, which provides fresh produce for the community of 38 residents for more than half the year. A second, larger greenhouse is in the planning stages and will be funded entirely by the community.

"We are looking at creating what is most cost effective for our communities; low cost energy is truly the avenue to stimulate business opportunity in very remote locations. You cannot inspire business growth with $.74 per kilowatt hour power costs," says Anderson.

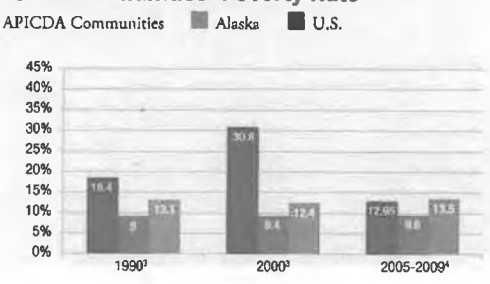
The Renewable Energy Powered Greenhouse project for Aleutian/Pribilof Island communities was introduced to the Alaska Legislature prior to its adjournment last year, with hopes of state funding being made available for the project in the near future.

APICDA, with other member organizations of the A-Team, will continue to inspire and nurture individuals in their conservation efforts, counsel and assist communities to obtain alternative energy solutions, and cultivate societal interactions within its communities.

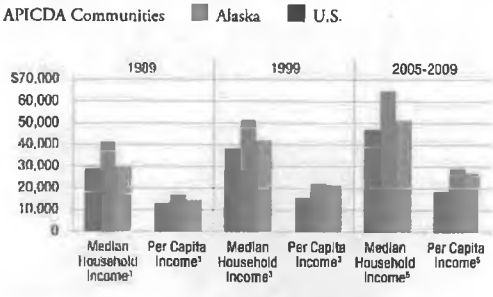
APICDA Communities' Population



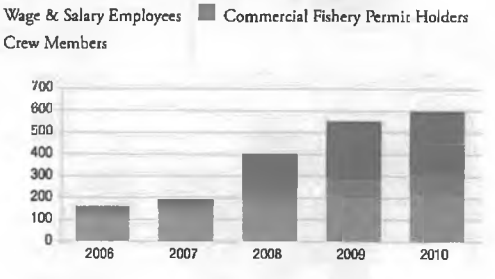
APICDA Communities' Poverty Rate



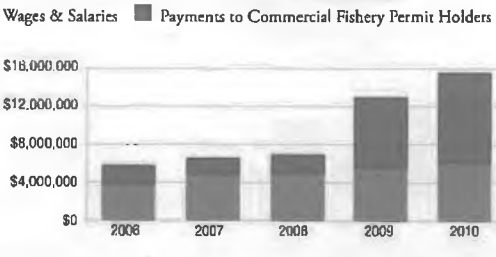
APICDA Communities' Median Household and Per Capita Income



APICDA Jobs and Fishery Workforce



APICDA Wages and Fishery Payments



¹ Source: Alaska Division of Community & Regional Affairs ² Source: U.S. Census Bureau, Census of the Population 2010 ³ Source: U.S. Census Bureau, Census of the Population 1990 and 2000 ⁴ Source: American Community Survey 5-year average population estimates and characteristics (January 2005 to December 2009) ⁵ Source: American Community Survey 5-year average population estimates and characteristics (January 2005 to December 2009 in 2009 inflation adjusted dollars)







BRISTOL BAY ECONOMIC DEVELOPMENT CORPORATION





Togiak Seafoods' goal is to train locals for fishing industry jobs with opportunities for advancement in the company. More than half of those hired by Togiak Seafoods in 2010 were local residents. In addition, ninety-one local fishermen delivered more than 1.9 million pounds of salmon to Togiak Seafoods in 2010.

A seafood processing joint venture—established with CDQ proceeds and a shared vision—is building the economy of the village of Togiak, and providing jobs, training, and better fish prices to this Alaska Native community of 817 people.

Togiak is the first village in the region to take advantage of Bristol Bay Economic Development Corporation's (BBEDC) Community In-Region Processing Plant Grant program, which is designed to help communities take ownership of sustainable resource opportunities beyond harvesting fish. A key component to the village's local economic development plan is the ability to add value to the fish harvested on Togiak's doorstep. Toward this effort, the Traditional Council of Togiak partnered with Copper River Seafoods (CRS), an Alaskan company with an international reputation for top-quality seafood. With help from CRS, and technical assistance from BBEDC, Togiak's business plan qualified for BBEDC's $2 million community processing grant. CRS matched that investment, and the Togiak Seafoods joint venture was born in 2009.

To bring their vision for a community-owned fish processing facility to fruition, Togiak would provide experienced local fishermen; access to sustainable wild salmon; and an empty, two-story, 30,000 square foot building, which would serve as the foundation for the business venture. CRS, eager to source additional wild salmon to fill a growing worldwide demand, would bring their technical expertise, logistics, access to markets, and high expectations for fish quality to the partnership.

In its first year of operation, the community-owned company bought more than 500,000 pounds of bled and iced salmon from twenty-seven Togiak gillnetters. News spread quickly that the new company paid significantly more than other Bristol Bay buyers—$1.12 a pound for sockeye salmon compared to a fleet-wide average of 80 cents a pound—and in 2010, participation, production, and earnings nearly tripled.

Ninety-one local fishermen delivered more than 1.9 million pounds in 2010, earning $1.9 million for their catch. While salmon prices increased Bristol Bay-wide in 2010, prices paid by Togiak Seafoods were significantly higher than average. Sockeye was bought for $1.18 a pound, kings for $2.65, and chum salmon for 30 cents a pound—compared to 95 cents, 60 cents, and 10 cents a pound paid for the same species by other Bristol Bay buyers.

Local fishermen are "ecstatic with the high prices we are paying and very proud of the fish processing plant they have created," said Jonathan Forsling, vice president of fisheries development and village

communications for Togiak's Traditional Council. In addition, Forsling says, the plant has brought new jobs to the community which, like many rural Alaska communities, had historically high levels of unemployment. More than half of those hired by Togiak Seafoods in 2010 were local residents. Other benefits to the community include training opportunities, discounted freight rates, and a revival of participation by Togiak's younger generation in the commercial fishery that is so close to home.

Renovation of Togiak's vacant building was completed in 2010, with half of the ground floor designated for processing salmon and salmon roe, and the remaining half reserved for future expansion. The second floor includes a bunkhouse big enough to house four-dozen workers, a full kitchen, and laundry facilities.

Another highlight of 2010 was a week-long workshop to teach local harvesters the best way to handle, bleed, and ice their catch. CRS, the staff of the Fishery Industrial Technology Center (FITC) in Kodiak, Alaska, and the Alaska SeaGrant Program provided technical expertise. The workshop featured: a lecture on marketing and economics delivered by seafood marketing specialist Quentin Fong; a discussion with Chris Napoli and Ryan Savo about BBEDC's fishing permit loans, insulated fish totes, slush ice bags, and other BBEDC services; and classes offered by BBEDC's Basic Vocational Education Program on hazard analysis and critical control points issues, fishing vessel safety, and first aid. The workshop's focus was to help Togiak fishers produce the highest quality salmon, to meet the standards that have earned CRS its reputation. According to FITC's Fong, CRS's prestige in world markets resonates perfectly for the community of Togiak, noting that "Togiak's big selling point is quality."

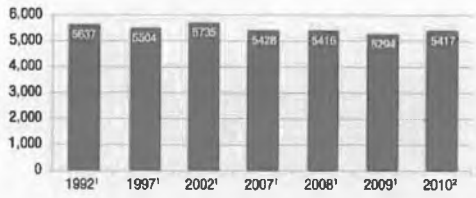
An important community goal of the new venture is to train locals for fishing industry jobs and for positions with opportunities for advancement in the company. For inspiration, Forsling looks to Vojtech Novak, a veteran of CRS who came to Alaska from the Czech Republic unable to speak a word of English. Many Togiak residents speak Yup'ik, the ancestral Eskimo language of Western Alaska. Vojtech's first job was on the "slime line" butchering fish—within three years, he was a supervisor, and after six years, a CRS plant manager in Cordova. From there he moved to Togiak to help get the new plant up and running—today Vojtech is manager of the Togiak Seafoods plant.

Looking to the future, Forsling said, "We look toward continued development and investment within our company to more vertically integrate." One goal is to buy a fish tender, a larger boat that would allow Togiak Seafoods to buy salmon from Igushik, a nearby river system fished primarily by Alaska Native residents of the village of Manokotak. "They have a great fish very similar to ours," Forsling said. "They have processing capacity issues there, too—and they are our neighbor. We look forward to helping them." He added, "Our motto is 'biggest and best in Bristol Bay,' for all species of fish, wildlife, and community.".

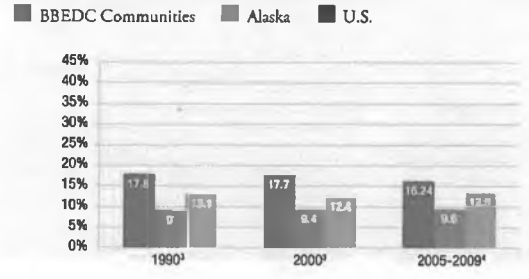
Moses Kritz, president of the Togiak Traditional Council and a member of BBEDC's Board of Directors, said the community-owned fish company has long been a dream—a dream that he's grateful is shared by CRS's President and CEO Scott Blake. Further, Kritz said, Togiak Seafoods is "the realization of the promise of the Community Development Quota program."

"It's the people of Western Alaska's coastal communities taking control of our own destiny through the wise use of the Bering Sea's fishery resources—sustainable resources around which our ancestors built their lives—and from which we are building our future."

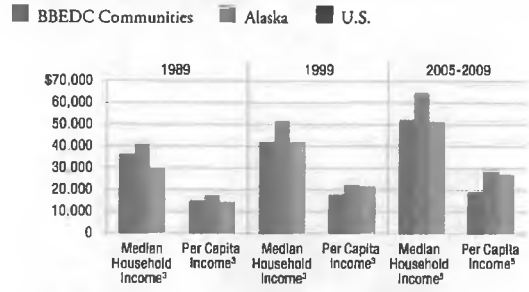
BBEDC Communities' Population



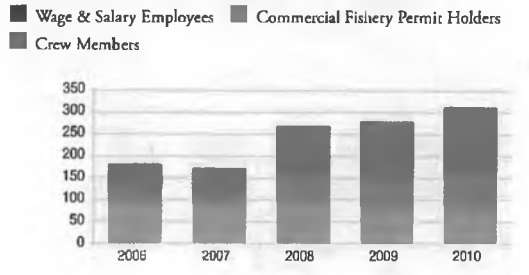
BBEDC Communities' Poverty Rate



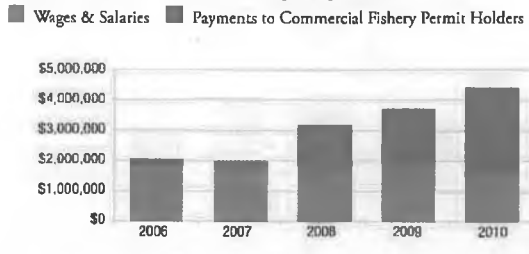
BBEDC Communities' Median Household and Per Capita Income



BBEDC Jobs and Fishery Workforce



BBEDC Wages and Fishery Payments



[1] Source: Alaska Division of Community & Regional Affairs [2] Source: U.S. Census Bureau, Census of the Population 2010 [3] Source: U.S. Census Bureau, Census of the Population 1990 and 2000 [4] Source: American Community Survey 5-year average population estimates and characteristics (January 2005 to December 2009) [5] Source: American Community Survey 5-year average population estimates and characteristics (January 2005 to December 2009 in 2009 inflation adjusted dollars)







CENTRAL BERING SEA FISHERMEN'S ASSOCIATION





The Saint Paul Small Boat Harbor was completed in October 2010 and is the final phase of a joint local, state, and federal effort that started nearly three decades ago. The SBH has provided renewed vigor to the halibut fishery by saving fishermen substantial deployment time, making it safer to operate and moor their boats, and allowing them to focus more of their time and effort on fishing.

Saint Paul Island residents and a number of visiting officials recently celebrated the dedication of the Saint Paul Small Boat Harbor (SBH). The SBH's completion in October of 2010 and its official dedication constitute a major milestone in Saint Paul's history.

"It is a dream come true," exclaimed lifelong resident Jason Bourdukofsky, Sr., "we waited for too many years!"

The Central Bering Sea Fishermen's Association (CBSFA), which contributed over $6 million out of the project's total cost of $20 million, owns and manages the new SBH. CBSFA worked with Bellingham Marine Industries (BMI) and the Dutra Dredging Company to finalize the design and installation of the SBH's infrastructure. The SBH is considered state of the art design and engineering, and the joint construction team consisting of CBSFA, BMI, Red Point, and Dutra was recently awarded the 2011 'Project Excellence Award' by the Coasts, Oceans, Ports, and Rivers Institute.

The SBH is the final phase of a joint local, state, and federal effort that started nearly three decades ago, soon after the 1983 Fur Seal Act Amendments directed the phase-out of the federally-managed northern fur seal harvest on the Pribilof Islands and the development of an economy based on commercial fishing. The first phase was completed in 1989 when the Saint Paul Harbor, consisting of a main breakwater and a second detached breakwater, became operational. This allowed Saint Paul to attract major fish processing facilities, such as the Trident Seafoods plant, and become an important delivery harbor for the Bering Sea crab fleet. During the peak years of the snow crab fishery in the 1990s, the Saint Paul harbor accounted for close to 40 percent of all snow crab deliveries in what was then a 200 million pound per year fishery. The second phase, the Harbor Improvements Project, occurred between 1999 and 2005 when the existing harbor was improved with the addition of underwater reefs to protect the main breakwater, the deepening of the harbor entrance channel and maneuvering area, and a tidal channel into the island's environmentally-sensitive salt lagoon.

Local residents view the final phase—the completed SBH—as critical to Saint Paul Island's long-term economic well-being and its diversification efforts. It also brings Saint Paul closer to fulfilling the objectives of the Fur Seal Act Amendments by consolidating Saint Paul's importance as a strategic port, hub, and service center for the Bering Sea's commercial fisheries.

"It will create new jobs in the fishing business, particularly for younger residents like me, who seek to make Saint Paul our home and a place to raise our families," says Jeffery Kauffman, a local fisherman and part of the younger generation of Saint Paul Island residents.

The halibut fishery is a major contributor and source of employment for the local economy. The SBH has already provided renewed vigor to the halibut fishery by saving fishermen substantial deployment time, making it safer to operate and moor their boats, and allowing them to focus more of their time and effort on fishing. With higher quotas and halibut prices at record highs, local fishermen and their crews are expecting one of their best ever fishing seasons. And, in a promising sign of the new business opportunities that may arise, the SBH has been used in its first season of operation by fishing vessels from other ports and private yachts, as well as by visiting cruise ships to shuttle passengers that are touring the Pribilof Islands.

In addition, the SBH is well-suited to accommodate and service the growing fleet of 58' x 26' vessels that are 100 percent owned by CBSFA, namely the F/V Saint Paul, which was completed in 2008, and the F/V Saint Peter, which is under construction and is expected to be completed in September of 2011. Both vessels will fish for CDQ and IFQ halibut, as well as CBSFA's allocations of Pacific cod and Bering Sea sablefish.

Ricardo Merculief, one of the first locals trained to operate the F/V Saint Paul, is now the vessel's captain. "Since first setting sail in 2008, the F/V Saint Paul has been very successful in its fishing activities and provides a safe and efficient platform for harvesting halibut IFQ, as well as CBSFA's CDQ halibut allocation that remains uncaught late in the year when the local small boat fleet retires for the season due to weather," said Merculief.

"The Saint Paul has also created numerous professional jobs for younger residents, myself included!" he added. "Having a state of the art harbor at which to dock, and from which to deploy, will make it a lot easier and safer for me and my crew to operate the Saint Paul and focus our time and energy on fishing," concluded Merculief.

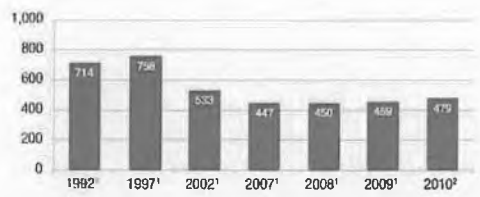
It is clear that the logistical efficiencies provided by the SBH are expected to have a multiplier effect on CBSFA's other investments and businesses, allowing these to maximize fishery revenues and job creation across the board.

Complementary to the SBH, a Manitowoc 4000 watt crawler crane, used by the builders in the construction of the harbor, was purchased to allow CBSFA to deploy the new docks every season and to launch heavier vessels. Next on the list of priorities are a vessel repair facility and other vessel support projects necessary to provide local and visiting vessel owners with all the proper maintenance, repair, and support services.

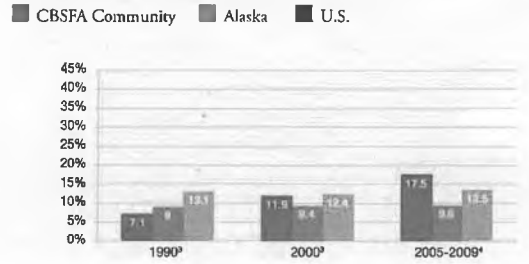
The SBH, and associated machinery and infrastructure, has already led to the creation of additional jobs in the community. CBSFA has hired three individuals to manage the operations of the SBH and vessel support program, and to operate and maintain the cranes and heavy equipment. CBSFA has also entered a contract with the local Tribal Enforcement to provide for the security and protection of the SBH.

"The CBSFA board and the local fishermen are very happy that this project has finally come to fruition," said CBSFA President Phillip Lestenkof. "We are already seeing the positive impacts of this harbor on so many aspects of life here on Saint Paul," he concluded.

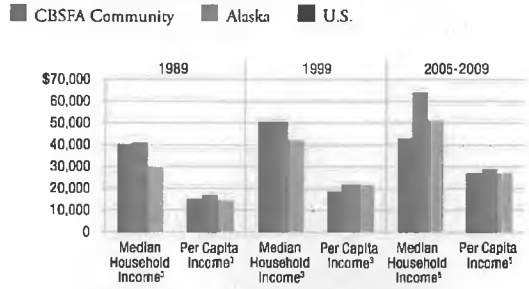
CBSFA Community's Population



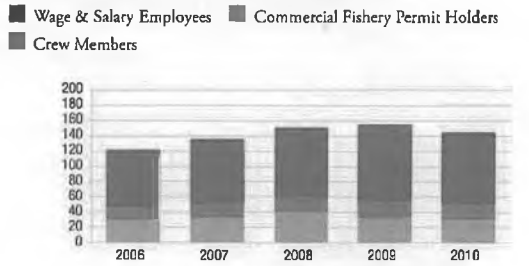
CBSFA Community's Poverty Rate



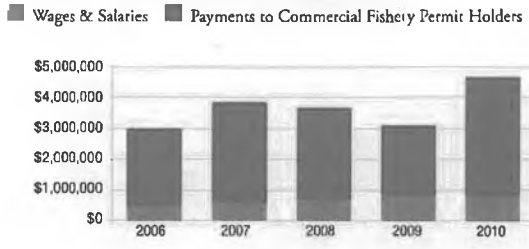
CBSFA Community's Median Household and Per Capita Income



CBSFA Jobs and Fishery Workforce



CBSFA Wages and Fishery Payments



[1] Source: Alaska Division of Community & Regional Affairs [2] Source: U.S. Census Bureau, Census of the Population 2010 [3] Source: U.S. Census Bureau, Census of the Population 1990 and 2000 [4] Source: American Community Survey 5-year average population estimates and characteristics (January 2005 to December 2009) [5] Source: American Community Survey 5-year average population estimates and characteristics (January 2005 to December 2009 in 2009 inflation adjusted dollars)







COASTAL VILLAGES REGION FUND



COASTAL VILLAGES
WORK FISH HOPE

CVRF has become the largest non-governmental employer for its 20 member villages by providing jobs in its plants, aboard its tenders, and as a result of providing a consistent market for salmon and halibut fishermen. In addition, more and more residents are now working as crew on CVRF's larger Bering Sea fishing vessels and in jobs with other seafood companies through CVRF's employment program.

2010 marked the first year in the 18-year history of the Community Development Quota (CDQ) program in which a CDQ group was positioned to harvest all of its pollock, cod, and crab quota aboard wholly-owned vessels in the Bering Sea.

Visionaries of the Coastal Villages region, such as Harold Sparck and Joe Paniyak of Chevak, Louis Bunyan of Hooper Bay, Wassilie Bavilla of Quinhagak, Steven "Angivran" White of Eek, and Hultman "Ike" Kiokun of Mekoryuk, worked long and hard to steer their CDQ company toward this goal. Much as a vessel crewman would, Coastal Villages Region Fund (CVRF) started at sea level, where the organization worked with and invested in mature fishing companies to learn the nuances of various fisheries, and then slowly moved up in rank until Coastal was ready to stand on the bridge of their own vessels.

Through boldness and tenacity, successes and mistakes, CVRF took the first milestone step toward becoming an independent owner in the Bering Sea/Aleutian Islands fisheries in 2005 when it purchased three crab vessels. Five years later, in 2010, Coastal Villages acquired three cod longliners, a pollock catcher/processor, and a fourth crab vessel. This fleet of eight vessels is able to harvest all of CVRF's pollock, cod, and crab quota in addition to significant amounts of quota owned by third parties, including other CDQ groups.

John O. Mark of Quinhagak, Chairman of Coastal Villages' Board of Directors, summed it up by saying, "As we approach the 20 year anniversary of the CDQ program, we are not done with our mission—it has really only just begun. Let me remind you again that we are graduating from our company's teenage years into a new phase of maturity, learning, and growth."

Growing up has been a bumpy ride for Coastal Villages. Representing 20 western Alaska villages from Platinum to Scammon Bay—one of the poorest and most economically-challenged regions in the U.S.—opportunities are few and hope is in short supply. Royalties from leasing CDQ quota have historically funded the programs, projects, and hope that Coastal Villages injects into its member villages, but that came at the price of being subject to the direction and strategies of other owners.

Coastal Villages and the other CDQ groups have a stake in the long-term viability and stewardship of all aspects of the economic and ecological systems of the Bering Sea. As an owner/operator, CVRF is now able to control its own direction and strategy. This "freedom" comes with great responsibility, however. No longer does a royalty check just show up in the mail. Inability to balance bycatch issues

with successful target fishing could jeopardize everything that CVRF has worked to build in its communities. Balance will be the key to success.

The rewards, however, have huge potential. Coastal Villages is using the profits generated by its Bering Sea fishery operations to fund a vast array of economic development opportunities for its region. Nineteen of the twenty communities have Community Support Centers, where residents can go for help with a wide range of needs, from mechanic and welding services, to accessing the internet, to renting bunk space. Scholarships are helping young adults take control of their futures by helping them go to college. The training program provides tuition and other assistance to help people attend various training sessions and obtain certifications. Countless interns are gaining valuable experience in a wide variety of career paths. Youth earn income helping the elders in their communities with everything from household chores to delivering food donations. Matching funds help communities get grant monies for projects crucial to their residents. Heating oil and firewood are delivered to help defray the high cost of keeping warm in an area where trees are nonexistent. In a region where being on the water is a way of life, life jackets, marine safety kits, and marine safety training sessions save lives.

The centerpiece of Coastal's community development program is its in-region salmon and halibut operation. The company operates numerous salmon and halibut buying stations, focusing on paying the highest sustainable price possible to its local fishermen. Coastal Villages serves over 1,000 fishing permit holders and crew from the region, providing a reliable market for salmon and halibut fisheries for the first time in history. The purchased fish are transported to Coastal's Goodnews Bay Regional Seafood Plant in Platinum, where CVRF employs over 200 people and produces some of the highest quality seafood products available for markets around the world. The majority of employees at Coastal Villages' plants are residents of its member villages, with the Alaska-hire rate above 95 percent in some seasons.

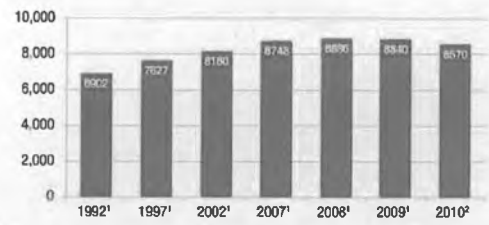
CVRF tender boats operate throughout much of the region, buying fish from local fishermen and delivering supplies and firewood to region residents. These tenders are crewed largely by people from the region and serve as stepping stones to working on Coastal Villages' larger vessels in the Bering Sea fisheries.

Between the jobs at Coastal's plants, aboard its tenders, and created as a result of providing a consistent market for salmon and halibut fishermen, Coastal Villages has become by far the largest non-government employer for its 20 member villages. Coastal's Board of Directors' goal—to provide hope through the opportunity to work and fish—has become a reality.

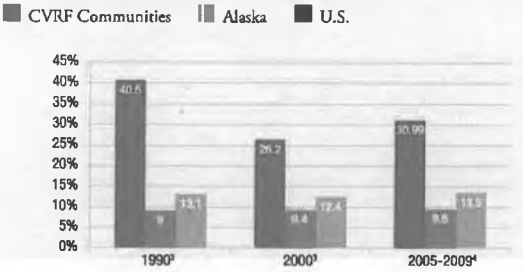
In addition to the in-region jobs CVRF has to offer, more and more Coastal residents are working as crew on Coastal's larger Bering Sea fishing vessels—the vessels that help pay for Coastal's in-region activity. In fact, there are around 235 positions aboard the eight Bering Sea vessels that Coastal now owns, not to mention jobs with other seafood companies that Coastal assists region residents in obtaining as part of its employment program. The jobs in the Bering Sea typically pay well, and compliment village lifestyle by allowing residents to work only part of the year away from home, as well as by reinforcing the value of sobriety. Residents of Coastal's member villages are just beginning to move up the crew ranks in the Bering Sea and there is great potential for the future.

The roadblocks to development in Western Alaska are many, but thanks to the hard work and dedication of the people who have been, are, and will be part of the CDQ program, there is rewarding WORK for the people of the region, there are many opportunities for harvesting FISH for both local use and commercial sales, and, most importantly, there is HOPE for a better future.

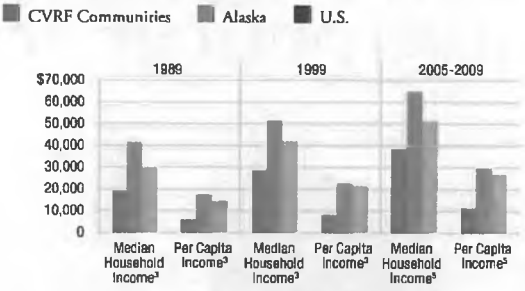
CVRF Communities' Population



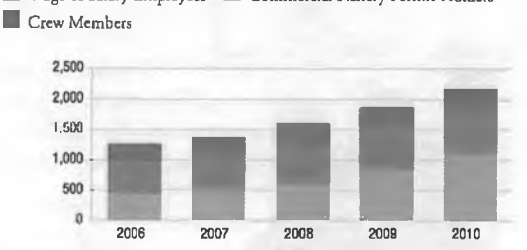
CVRF Communities' Poverty Rate



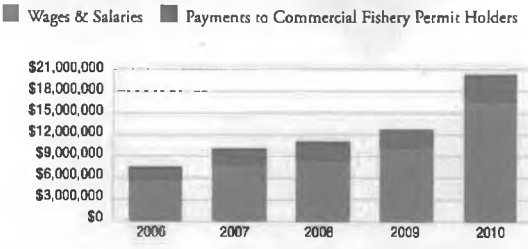
CVRF Communities' Median Household and Per Capita Income



CVRF Jobs and Fishery Workforce



CVRF Wages and Fishery Payments



[1] Source: Alaska Division of Community & Regional Affairs [2] Source: U.S. Census Bureau, Census of the Population 2010 [3] Source: U.S. Census Bureau, Census of the Population 1990 and 2000 [4] Source: American Community Survey 5-year average population estimates and characteristics (January 2005 to December 2009) [5] Source: American Community Survey 5-year average population estimates and characteristics (January 2005 to December 2009 in 2009 inflation adjusted dollars)







NORTON SOUND ECONOMIC DEVELOPMENT CORPORATION



NSEDC contributed $1 million to UVEC's 600 kilowatt wind installation for development and construction. The system has the potential to supply up to 35 percent of the power needs for Unalakleet's 700 residents. After nearly two years of operations, the turbines have reduced the village's dependence on diesel fuel by an estimated 5,000 gallons a month.

Standing tall on a hillside above the Bering Sea community of Unalakleet, six turbines have steadily been transforming the breeze into clean, low-cost energy since November 2009. And while the windmills' power line may stop at the village, the alternative energy project's reach might very well spread across the entire Norton Sound region.

Built by STG Incorporated and owned and operated by Unalakleet Valley Electric Cooperative (UVEC), the 600 kilowatt wind installation attracted the support of Norton Sound Economic Development Corporation (NSEDC) through a $1 million contribution for development and construction. More importantly, the project spurred NSEDC to offer the same level of support to its remaining 14 member communities toward initiatives that reduce the cost of energy.

NSEDC's Community Energy Fund makes $1 million available to each of its communities to facilitate the development of safe and reliable energy infrastructure through the installation and construction of upgrades to community power generation and distribution systems, alternative/renewable energy projects, and projects with potential for energy cost reduction.

The UVEC wind project serves as a model for what NSEDC aims to accomplish with the Community Energy Fund. In the Norton Sound region—like much of rural Alaska—high fuel prices cast a long shadow that touches nearly every aspect of life. Prohibitive energy costs stymie business and economic development, limit residents' ability to participate in subsistence activities, and siphon off precious income in communities where employment opportunities are limited. Affordable energy not only saves the region's residents money, it provides opportunity for independence, employment, and an improved quality of life.

After more than a year and a half of operations, the turbines have reduced Unalakleet's dependence on diesel fuel for power generation by an estimated 5,000 gallons a month, according to UVEC General Manager Ike Towarak. With the price UVEC pays for fuel vaulting from $2.46 to more than $4 per gallon over the last three years, each gallon spared translates to cost savings for the utility and its patrons. "It allows people to spend money in places other than on electricity," Towarak said. "The wind has helped us avoid almost 3.4 cents a kilowatt hour in fuel surcharge [for 2011/2012]."

All in the timing

NSEDC's support of the wind project and the subsequent creation of the Community Energy Fund was a product of the right idea being presented at the right time. "NSEDC's support of Unalakleet Valley Electric Cooperative and the creation of the Community Energy Fund was a product of good timing," said

NSEDC's Community Benefits Director Paul Ivanoff III. "UVEC's proposal just happened to be ready at the same time the NSEDC Board of Directors tasked the corporation's staff to find ways to cut costs for its seafood plant operations." The Norton Sound Seafood Products fish plant is one of the largest consumers of electricity in Unalakleet.

Ivanoff said the NSEDC board saw the benefits that energy development initiatives could bring to the region and moved forward with the allotment of $1 million per community. The board realized that the creation of new energy projects would not only deliver more efficient power generation once operational, but could also provide employment and contractual opportunities for communities while being built. "Community Energy Fund initiatives set in motion projects that help the local economy by offering high-paying contracts for local businesses and high-paying jobs for individuals," Ivanoff said. He noted that communities see the added benefit of increased economic activity such as rentals, and food and fuel sales while projects are underway. The projects also have the potential for long-term employment through maintenance and operation of the resulting energy systems.

Not all projects seeking support from NSEDC's Community Energy Fund need be renewable or alternative in nature. Population, geography, existing infrastructure, and additional funding sources are all considerations that must be taken into account in developing a project that is appropriate for a community. For some villages, this may mean an upgrade to its current generators or the pursuit of more efficient fuel-power systems.

In the case of Unalakleet, the wind farm was several years into its development by the time NSEDC became involved. Funding was also provided by the Alaska Energy Authority and the Unalakleet Native Corporation. Following the wind project's installation, UVEC completed a generator upgrade, which has resulted in further fuel savings, according to Towarak. "Before we were only producing 13 kilowatt hours per gallon of fuel, now we are producing over 15 kilowatt hours per gallon," he said.

Watch the savings

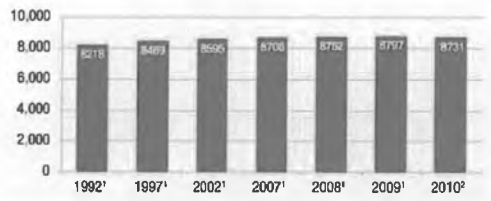
You don't need to be in Unalakleet to see how the wind turbines are benefitting the village. A website, northernpower.kiosk-view.com/unalakleet, tracks the turbines, allowing visitors to see which windmills are turning and how much power each is producing in real time. The site also tracks the entire project's performance to date, listing the total amount of energy produced since brought on line, as well as estimated cost savings, gallons of fuel displaced, and pollution offsets.

As of early August 2011, it is estimated that the project has produced 1.36 million kilowatt hours, enough electricity to power 424 homes for a year. Since the installation first started producing power, it has displaced approximately 104,000 gallons of diesel fuel at an estimated cost savings of more than $271,000. The system has the potential to supply up to 35 percent of the power needs for Unalakleet's population of approximately 700 residents.

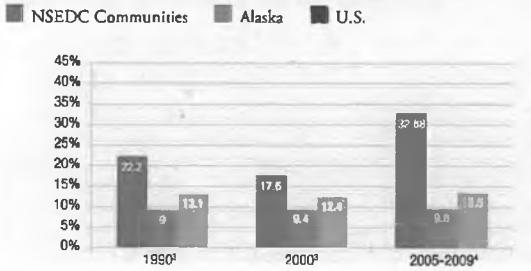
As fuel prices climb each year—a trend that does not appear to be reversing any time soon—the number of years it will take for the wind farm investment to pay for itself through fuel savings continues to shrink. "The payback period will definitely shorten," Towarak said. "The turbines are expected to last 25 years. There will be benefits every year if the turbines operate like they are supposed to."

The turbines also complement UVEC's four diesel-powered generators by allowing the equipment to run less often, which in turn means fewer visits from maintenance crews. "Right now we're getting 30 mph winds, so we only have one generator running," Towarak said one blustery August afternoon. "These turbines will help us avoid a lot of the maintenance costs since the engines don't need to run as long."

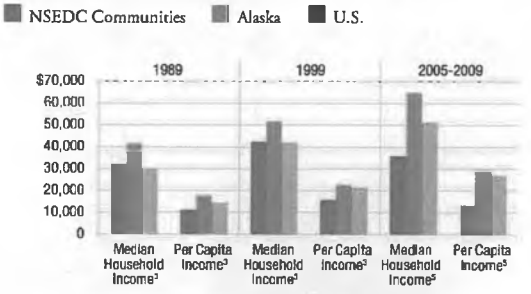
NSEDC Communities' Population



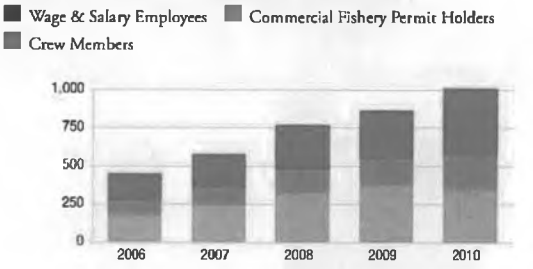
NSEDC Communities' Poverty Rate



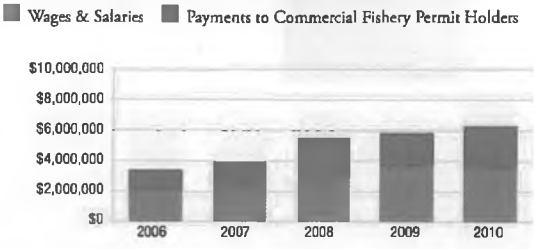
NSEDC Communities' Median Household and Per Capita Income



NSEDC Jobs and Fishery Workforce



NSEDC Wages and Fishery Payments



[1] Source: Alaska Division of Community & Regional Affairs [2] Source: U.S. Census Bureau, Census of the Population 2010 [3] Source: U.S. Census Bureau, Census of the Population 1990 and 2000 [4] Source: American Community Survey 5-year average population estimates and characteristics (January 2005 to December 2009) [5] Source: American Community Survey 5-year average population estimates and characteristics (January 2005 to December 2009 in 2009 inflation adjusted dollars)









YUKON DELTA FISHERIES DEVELOPMENT ASSOCIATION





YDFDA subsidiary Yukon River Towing supports the local fishing fleet, hauls gravel, operates a sawmill, and bids on and undertakes construction projects in the Lower Yukon region. In addition to increasing economic opportunities, YRT provides employment and training for the region's residents.

When the Board of Directors of Yukon Delta Fisheries Development Association (YDFDA) created Yukon River Towing (YRT) in January 2010, the goal was to create a for-profit company that would haul gravel on the Lower Yukon, as well as serve as YDFDA's construction arm, bidding on and undertaking projects in the region. Equally important, the Board envisioned YRT as a vehicle that could be used to provide on-the-job training and well paying jobs for in-region workers.

YRT showed signs of success in all three areas by the end of its first full year of operation. This suggested that YRT could serve as a model for future investments. "Yukon River Towing is a good example of the kind of investment that YDFDA seeks—investments that provide immediate employment opportunities for local residents while also delivering a financial return to the company," notes YDFDA's Executive Director, Ragnar Alstrom.

YRT's assets include a 600-ton capacity cargo barge, a triple screw 650 horsepower pusher tug, and six LCM-style vessels. The LCMs are former troop and tank carriers from World War II that now work double-duty as pusher-tugs with the cargo barge and operate as tenders, serving the fleet of 418 fishermen on the lower Yukon River's areas Y-1 and Y-2. Given their dual purpose—supporting fishing operations and hauling gravel, these vessels are on the river most of the season.

A captain and two deckhands operate each LCM, creating employment and valuable training opportunities for 36 regional workers. All crew sea time is documented; in addition, all of the training that crew members receive counts toward U.S. Coast Guard licensing.

On the construction side of the business, YRT owns and operates a full line of heavy equipment including trucks, 'dozers, excavators, and road-building equipment, as well as vertical building machinery and tools. Additionally, YRT operates a sawmill in Emmonak that produces everything from heavy construction beams and timbers, to logs used in home building, to finished wood trim.

In YRT's first year, the company was contracted to haul more than 50,000 cubic yards of gravel and rock from Nome by the Federal Emergency Management Agency (FEMA) for the erosion control project in Emmonak, and by the City of Emmonak for its Emergency Community Road Repair project. Other 2010 efforts included building a 1,700 square-foot, three-bedroom, two-bathroom model log home in Emmonak; lightering freight and equipment; piloting ocean barges up the river; leveling and repairing buildings; and finishing the sawmill. Total revenue for fiscal year 2010 was over $3 million, and in-region payroll totaled $521,981 for 36 employees. By the end of 2010, the logging operation milled approximately 20,000 feet of logs at a value of $40,000 to 30 loggers.

Competition for regional construction projects is intense, notes Captain Tom Link, who manages YRT for YDFDA. Given the current economic climate, companies "from everywhere" submit bids on regional projects-including companies that may not appreciate or comprehend the challenges of working in such a remote location with so many logistical constraints, such as working against the weather.

One thing is certain, however, working with YRT on construction projects, locals are given the kind of on-the-job training that equips them to succeed in family-wage jobs, and brings economic opportunities to the region through their efforts in a for-profit company. And the same holds true for the marine side of YRT. As Captain Link points out, the entire YRT operation is geared toward job training and creation, with the ultimate goal of "training a local person to take over my job."

So what does it take to work for YRT? According to Captain Link, work on an LCM involves maritime skills, spending "just plain time on the water," and training to become licensed in several key areas, including firefighting, first aid, and safety. As part of their training, crew members attend the Alaska Maritime Training Center in Seward for the necessary courses to become U.S. Coast Guard-certified.

One crew member is Gordon Westlock, Jr. Westlock started working for YDFDA when he was just 16 years old—first on the fish processing line, and later on LCMs. His work ethic was apparent immediately. "I was the first one there and the last one out," he notes, describing his ambition and desire to be a valuable employee.

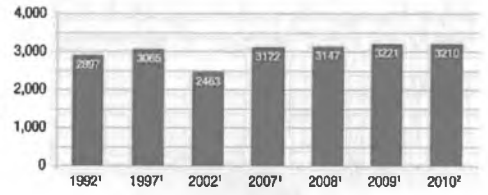
Westlock, an Emmonak High School graduate, talks about being taught from an early age to be hard-working and resourceful. When other kids were handed snow machines and bicycles on a silver platter, Gordon Westlock, Jr. was told that if he wanted those luxuries, he would have to find a way to get them for himself. So, as Westlock described, he scrounged around the landfill, finding spare parts and frames—eventually building a working snowmobile and bicycle, then made more to sell to others.

Fresh out of high school, Westlock joined the Job Corps in Palmer, where he spent nine months doing facilities maintenance. In 2004, wanting to be closer to his family, he moved to Bethel where he spent three years doing plumbing for Bethel Water and Sewer. Ready for a change, Westlock was hired on the Qipngayak as a deckhand in 2007. After one summer, Westlock was promoted to Captain of the Nunataq in 2008. How did he do it? "I pushed myself 110 percent," Westlock says. "I wanted to learn everything in that one summer."

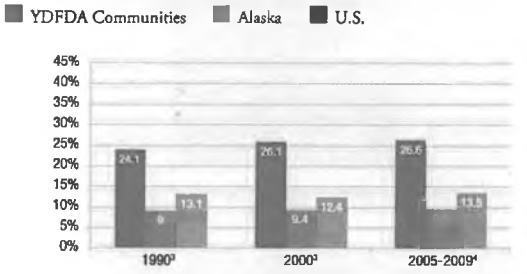
Because his Uncle Oscar is an Elder, people were watching him closely, he says. Such was his ambition to learn to be a crew member on the LCM, "I stayed up for three days straight, learning how to turn the boat," Westlock muses. As Captain Link points out, Gordon Westlock, Jr. is not only a great employee and a hard worker, but he is also a role model to the youth of the region. In addition to working hard on the job, Westlock volunteers with teens, encourages dropouts to go back to school, and shows by example the value of education and hard work. His message to them: "Without school, you have nothing."

The establishment and early success of Yukon River Towing demonstrates that there is a significant opportunity to diversify the regional economy. "By creating and supporting YRT, the Directors have demonstrated their willingness to provide more economic benefit to YDFDA and the region, more employment opportunities for our villages, and the chance for a locally owned construction company to compete with outside contractors," said Executive Director Alstrom. "In its first year, YRT demonstrated the impact a regionally owned company can have on the economy. It gives a chance to influence what takes place here in the future."

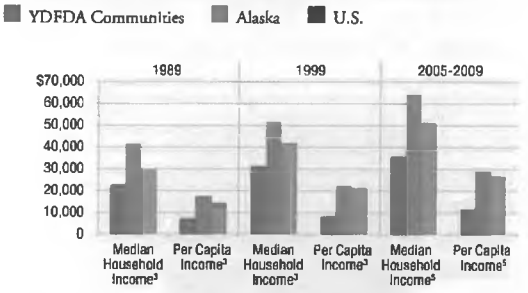
YDFDA Communities' Population



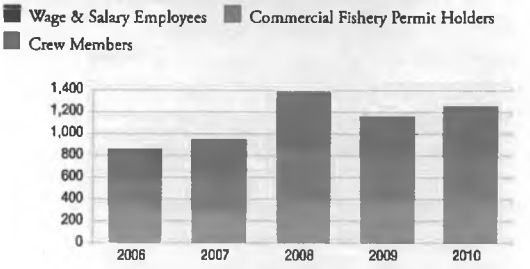
YDFDA Communities' Poverty Rate



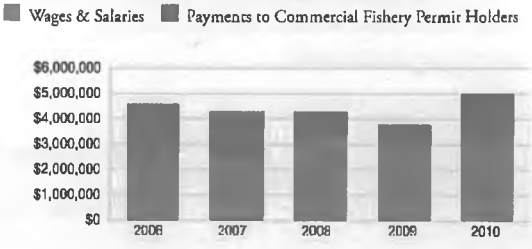
YDFDA Communities' Median Household and Per Capita Income



YDFDA Jobs and Fishery Workforce



YDFDA Wages and Fishery Payments



¹ Source: Alaska Division of Community & Regional Affairs ² Source: U.S. Census Bureau, Census of the Population 2010 ³ Source: U.S. Census Bureau, Census of the Population 1990 and 2000 ⁴ Source: American Community Survey 5-year average population estimates and characteristics (January 2005 to December 2009) ⁵ Source: American Community Survey 5-year average population estimates and characteristics (January 2005 to December 2009 in 2009 inflation adjusted dollars)

OVERALL FINANCIAL PERFORMANCE

Financial performance is a key metric for each CDQ entity and the CDQ program as a whole. The six CDQ entities are federally-recognized nonprofit organizations under the Internal Revenue Code section 501 (c). Each entity has a separate board of directors that independently governs the organization, selects and supervises its chief executive officer, and reviews the overall performance of the entity.

Aggregated financial statements for the six CDQ entities are provided in the charts to the right.

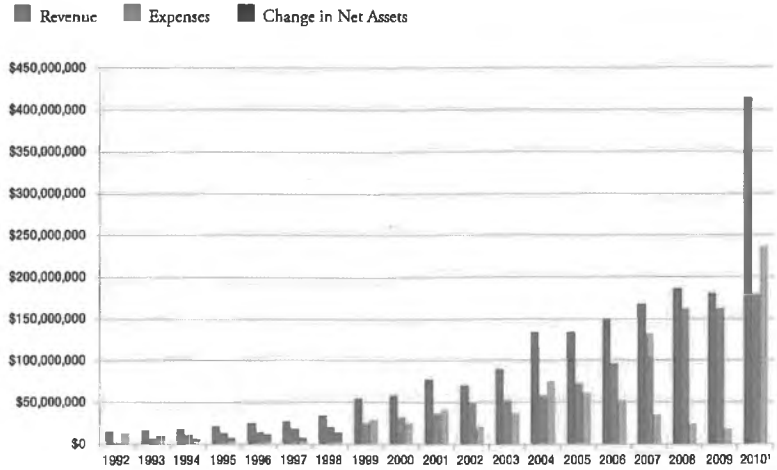
The **Statement of Activities** is the nonprofit equivalent of a profit and loss statement. In 2010, the six CDQ entities generated over $414.5 million in revenue with operating expenses of approximately $178.8 million, resulting in an increase in net assets of over $235.7 million. Operating expenses include all program costs, investments, and general and administrative expenses.

The **Statement of Financial Position** is the nonprofit equivalent of a balance sheet. In 2010, the six CDQ entities combined held assets totaling nearly $864 million and liabilities totaling just over $126 million; bringing combined net assets to approximately $737.6 million.

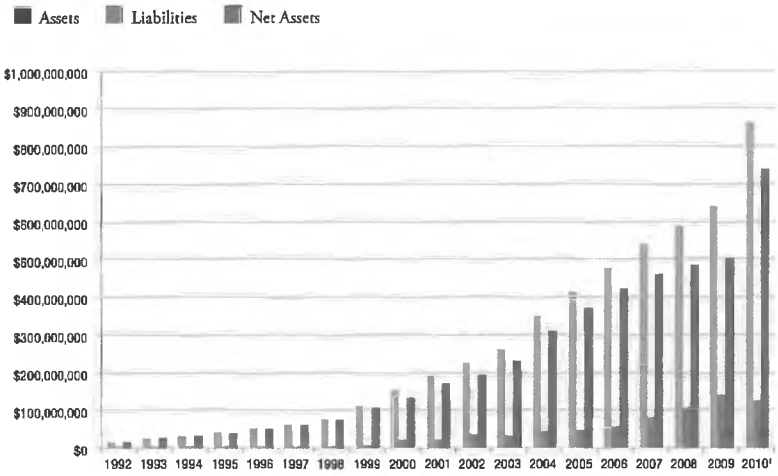
Of the $414.5 million in revenues, roughly 16 percent was derived from CDQ royalties. Direct income exceeded royalty income for the first time in 2004. That pattern has continued since that time with direct income ranging from 55 to 84 percent annually.

More detailed information from this report can be found at wacda.org and on the websites of the six CDQ entities.

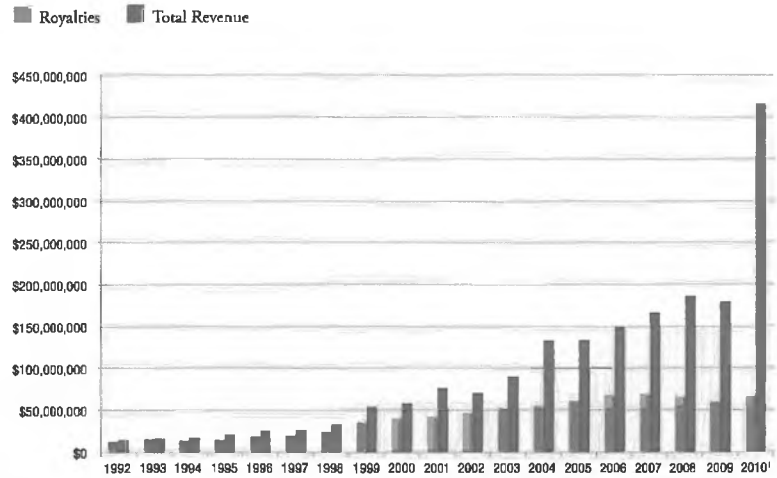
Aggregated Statement of Activities



Aggregated Statement of Financial Position



Aggregated CDQ Royalties vs. Total Revenues



[1] 2010 revenue and total assets reflects a transaction in which equity in a seafood company investment was redeemed in exchange for fishing assets.

WACDA BOARD OF DIRECTORS



Larry Cotter
Chief Executive Officer

Aleutian Pribilof Island Community
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Juneau, AK 99801-1211
www.apicda.com



Robin Samuelsen
President/Chief Executive Officer

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Development Corporation
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www.bbedc.com



Phillip Lestenkof
President

Central Bering Sea
Fishermen's Association
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Executive Director

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Chief Operating Officer

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Ragnar Alstrom
Executive Director

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WACDA
WESTERN ALASKA COMMUNITY DEVELOPMENT ASSOCIATION

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HCR

25

<TARGET><BILL>HCR 25</BILL><SUBJECT>HCR
25</SUBJECT><COMM>HFSH27</COMM></TARGET>

CS FOR HOUSE CONCURRENT RESOLUTION NO. 25(FSH)

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-SEVENTH LEGISLATURE - SECOND SESSION

BY THE HOUSE SPECIAL COMMITTEE ON FISHERIES

Offered:
Referred:

Sponsor(s): REPRESENTATIVES NEUMAN, Johnson, Chenault, Stoltze, Olson, Fairclough, Feige, Thompson, Costello, Hawker, Saddler, Keller, Petersen, Lynn, Gara, Gatto, Millett, Muñoz, Pruitt, Tuck, Seaton

A RESOLUTION

Celebrating the 75th anniversary of the Wildlife and Sport Fish Restoration Program.

BE IT RESOLVED BY THE LEGISLATURE OF THE STATE OF ALASKA:

WHEREAS, more than a century ago, hunters and anglers were among the first conservationists to realize that the natural resources of the country were in peril and could not be sustained without regulated harvests and habitat preservation; and

WHEREAS hunters and anglers have historically supported legislation to stop excessive harvest of fish and wildlife, establish fish and game agencies to protect fish, wildlife, and habitat, and assess special fishing and hunting license fees to help fund agency efforts to conserve natural resources for future generations; and

WHEREAS the Alaska State Legislature recognizes that the primary authority to protect and manage fish and wildlife in the state lies with the state's fish and wildlife agencies; and

WHEREAS, when hunters and anglers realized that licensing fees were insufficient to restore and sustain healthy fish and wildlife populations, they supported placing excise taxes on firearms, ammunition, and archery, hunting, and fishing equipment to raise funds to support fish and wildlife restoration and enhancement efforts by state agencies; and

WHEREAS the Wildlife and Sport Fish Restoration Program in the United States Fish and Wildlife Service, which began 75 years ago with the passage in 1937 of the Federal Aid in Wildlife Restoration Act and later expanded with the passage in 1950 of the Federal Aid in Sport Fish Restoration Act, represents an effective "user pay, public benefit" system; and

WHEREAS, since 1939, contributions to state fish and wildlife agencies by the Wildlife and Sport Fish Restoration Program have exceeded $13,000,000,000, representing the greatest single conservation effort in the history of the United States and the nation's primary means of funding conservation; and

WHEREAS manufacturers of firearms, ammunition, and hunting, fishing, and boating equipment have collected excise taxes in firearms, ammunition, archery equipment, manufactured fishing tackle, electric trolling motors, marine electronics, and motorboat fuel that have been distributed to the states through the United States Fish and Wildlife Service; and

WHEREAS manufacturers of firearms, ammunition, and hunting, fishing, and boating equipment have supported wildlife and sport fish restoration programs and continue to exhibit a spirit of cooperation with federal and state fish and wildlife agencies; and

WHEREAS the cooperative partnership between industry, hunters, anglers, boaters, and recreational shooters, the United States Fish and Wildlife Service, and state natural resource agencies is the most successful model for fish and wildlife management in the world and has resulted in the restoration of fish and wildlife populations from Alaska to Hawaii;

BE IT RESOLVED that the Alaska State Legislature, on the 75th anniversary of the nation's greatest conservation story, recognizes the leading roles of hunters, anglers, boaters, recreational shooters, industry, state fish and wildlife agencies, and the United States Fish and Wildlife Service in restoring healthy populations of fish, wildlife, and other natural resources, both game and nongame, to the abundance enjoyed today.

COPIES of this resolution shall be sent to the Honorable Lisa Murkowski and the Honorable Mark Begich, U.S. Senators, and the Honorable Don Young, U.S. Representative, members of the Alaska delegation in Congress; to Terry Holliday, President, Safari Club International, Alaska Chapter; and to the National Assembly of Sportsmen's Caucuses Executive Council.

ALASKA STATE LEGISLATURE

Session:
State Capitol Building,
Room 428
Juneau, Alaska 99801-2186
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Fax: (907) 465-2070
Toll Free: (877) 465-3004

Interim:
1292 Sadler Way, Ste. 324
Fairbanks, Alaska 99701
Phone: (907) 452-1088
Fax: (907) 452-1146
Toll Free: (877) 465-3004

REPRESENTATIVE STEVE THOMPSON
DISTRICT 10

FAX COVERSHEET

To: Leg. Legal

Fax Number: 465-2029

From: Jane Pierson

Date: 3/1/12 **Number of pages including cover: 1**

Re: Please go final on HCR25 version 27-LS1350\M with the following conceptual amendment

---

Tonight the House Fisheries Committee heard and passed from committee HCR25 with one conceptual amendment as follows:

Add the Alaska Chapter of SCI and the National Assembly of Sportsmen's Caucuses (NASC) to the list of folks that a copy of this resolution should be sent.

Please make this amendment and go final on the bill.

Thank you.

E-Mail: Representative.Steve.Thompson@legis.state.ak.us
Website: www.akrepublicans.org/thompson/

ALASKA STATE LEGISLATURE

Member:
House Finance Committee
Legislative Budget & Audit Committee

Chair:
House Budget Sub Committees on:
- Department of Administration
- Department of Labor and Workforce Development

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Alaska State Capitol
Juneau, AK 99801-1182
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Interim:
600 E. Railroad Ave
Wasilla, AK 99654
Phone: (907) 376-2679
Fax: (907) 373-4745

Representative Mark Neuman
Rep.Mark.Neuman@legis.state.ak.us

Sponsor Statement

HCR 25, Wildlife & Sport Fish Restoration Program

American hunters and anglers were some of the first conservationists to realize the importance of our natural resources and that without their support they would be in peril if not properly managed. They understood the necessity to regulate harvests and preserve habitat.

Throughout the history of the conservation movement, hunters and anglers have led the way in supporting legislation to stop excessive harvest of fish and wildlife, and establish federal and state fish and game agencies to protect fish, wildlife, and habitat.

The revenue generated from the purchases of hunting and fishing licenses fund agencies efforts to conserve natural resources for future generations.

Wildlife and Sport Fish Restoration Programs began 75 years ago with the passage of the Federal Aid in Wildlife Restoration Act of 1937. Thirteen years later in 1950, the Federal Aid in Sport Fish Restoration Act created an effective "user pay - public benefit" system.

Since 1939, contributions to state fish and wildlife agencies by wildlife and sport fish restoration programs have exceeded $13,000,000,000. This represents the greatest single conservation effort in the history of the United States and the nation's primary means of funding conservation.

The Alaska State Legislature, on the 75th anniversary of the nation's greatest conservation story, recognizes the leading roles of hunters, anglers, boaters, recreational shooters, industry, state fish and wildlife agencies, and the United States Fish and Wildlife Service in restoring healthy populations of fish, wildlife, and other natural resources, both game and nongame, to the abundance enjoyed today.

Version 27-LS1350\M

FISCAL NOTE

STATE OF ALASKA
2012 LEGISLATIVE SESSION

Bill Version: **HCR 25**
Fiscal Note Number:
() Publish Date:

Identifier (file name): HCR25-LEG-COU-2-29-12
Title: "Celebrating the 75th anniversary of the Wildlife and Sport Fish Restoration Program."
Sponsor: Reps Neuman, Johnson, Chenault, Stoltze, Olson...
Requester: House Special Committee on Fisheries

Dept. Affected: Legislature
Appropriation: Legislative Council
Allocation: Session Expenses
OMB Component Number: 782

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	FY13 Appropriation Requested	Included in Governor's FY13 Request	Out-Year Cost Estimates				
OPERATING EXPENDITURES	**FY13**	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**
Personal Services							
Travel							
Services							
Commodities							
Capital Outlay							
Grants, Benefits							
Miscellaneous							
TOTAL OPERATING	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

FUND SOURCE		(Thousands of Dollars)						
1002	Federal Receipts							
1003	GF Match							
1004	GF							
1005	GF/Prgm (DGF)							
1037	GF/MH (UGF)							
1178	temp code (UGF)							
TOTAL		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

POSITIONS							
Full-time							
Part-time							
Temporary							

CHANGE IN REVENUES							

Estimated SUPPLEMENTAL (FY12) operating costs _____ *(separate supplemental appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Estimated CAPITAL (FY13) costs _____ *(separate capital appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Why this fiscal note differs from previous version (if initial version, please note as such)

Initial Version

Prepared by: Jessica Geary, Finance Manager — Phone: 465-6626
Division: Legislative Affairs Agency — Date/Time: 2/29/12 8:53am
Approved by: Pamela Varni, Executive Director — Date: 2/29/2012
Legislative Affairs Agency

(Revised 1.17.2012 OMB)

FISCAL NOTE

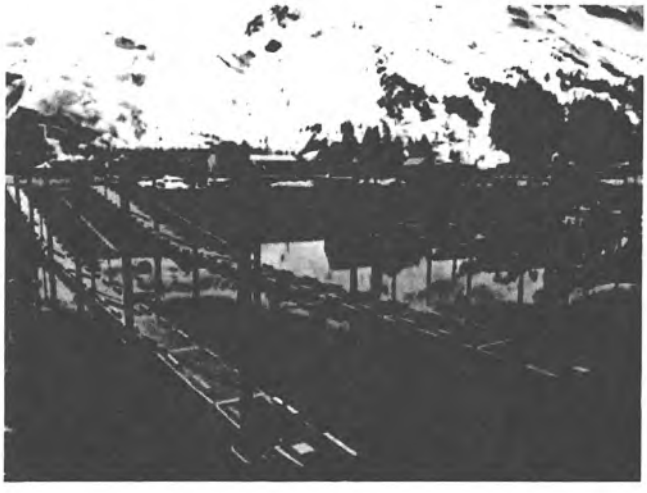
STATE OF ALASKA
2012 LEGISLATIVE SESSION

BILL NO. HCR 25

Analysis

This Legislation has zero fiscal impact on the Legislative Affairs Agency.

Alaska Department of Fish and Game



Whittier Harbor boat ramp

Grant Program Overview

The Federal Aid in Sport Fish Restoration (SFR) Act, often referred to as the Dingell-Johnson (D-J) Act or the Wallop-Breaux (W-B) Amendment, not only provides funding for sport fisheries management and research, but also funds projects to improve recreational power boating and sport fishing access. This legislation has created a model "user pay/user benefit" program through federal excise taxes and import duties placed on sport fishing equipment, recreational powerboats, and gasoline used in recreational boats. The tax revenue collected by the U.S. Treasury is transferred to the U.S Department of Fish and Wildlife Service, which is the agency responsible for administering the SFR program. The Alaska Department of Fish and Game (ADF&G) is the only department in state government that is allowed to receive and use SFR funds. The SFR program will cover up to 75% of the cost of an eligible project and requires a 25% non-federal match, which is often met through the sale of sport fishing licenses. To help control program costs, projects are often partnered with other state departments, as well as local governments.

The ADF&G Sport Fish Division has both regional and statewide staff who work with state and federal land managers and local governments to identify, facilitate design and construction, and fund capital improvements and maintenance of boating access sites. Projects are built to Americans with Disabilities Act (ADA) guidelines and include boat launches and parking areas, restrooms, transient moorage, fish cleaning facilities, and other fresh water and marine access site improvements.

Over the years, the Recreational Boating and Access Program has helped to open boating and angler access to many Alaskan waters, both fresh and marine. Over 160 capital improvement projects have been accomplished, which have provided new and improved access to sites throughout the state. Twice as big as Texas, yet with fewer roads than Delaware, Alaska presents unique recreational access challenges. Even so, if you've ever fished or boated in Alaska, chances are you used a facility constructed through the Division of Sport Fish Recreational Boating and Angler Access Program.

Funding Restrictions

According to federal aid regulations, SFR grants can be approved only if they primarily benefit the recreational boating and sport fishing public. These funds cannot be used for projects that primarily support subsistence, personal use, or commercial fishing groups. Subsistence and personal use fisheries are restricted to Alaska residents only and are therefore not open to the public in the federal sense. In addition, the "methods and means" used in subsistence, personal use, and commercial fisheries - gillnets, set nets, and dip nets - are not allowed in sport fisheries, and are thus not subject to the excise tax that supports the

Recreational Boating and Angler Access Program. Other users may use an SFR project, but such use cannot displace recreational boater and sport angler use.

Two Types of Projects: Recreational Boating and Angler Access (Non-Boating)

The Wallop-Breaux (W-B) Amendment to the SFR Act requires that a minimum of 15% of SFR funds allocated to Alaska must be used for recreational power boating access projects. However, there is no such requirement on the use of SFR funds for angler access projects. Funding requests for angler access projects compete directly with other Division of Sport Fish SFR programs, such as research, management, hatchery support, information and education, and habitat restoration. Since a large portion of boating access funds comes from federal taxes on fuel and recreational power boats, project proposals that primarily benefit non-motorized boats (canoes, kayaks, and rafts) or diesel-powered boats do not qualify as recreational boating related projects. However, these proposals may be considered for SFR angler access funding.

Recreational Boating Projects



SFR boating access funds must be used only for constructing, renovating, improving, or maintaining access for marine or freshwater trailerable (under 26 feet), gasoline-powered boats. Examples are boat launch ramps, transient docking facilities, fish cleaning tables, parking areas, restrooms, land acquisition and development for power boating use, and related support facilities.

» Listing of eligible boating access projects

Recreational Angler Access (Non-Boating) Projects



SFR non-boating funds can be used for acquiring land, and constructing, improving, or maintaining public works such as sportfishing-related parking and camping areas, trails, fishing piers or docks, fish cleaning tables, restrooms, and associated facilities that are not related to power boating use.

» Listing of eligible angler access projects

Project Identification

Recreational access needs are assessed and projects identified by the local Sport Fish Area Management Biologist (AMB) or Access Program staff. The AMB submits a list of project ideas annually to the Access Program Manager, who then reviews and researches the projects to ensure adherence to SFR regulations and Division of Sport Fish Access Program guidelines. Project ideas are ranked utilizing established criteria and are then prioritized based on project validity, need, and funding availability.

Additional Resources

- Information on ADA accessible facilities can be found at the Alaska Department of Natural Resources, Division of Parks and Outdoor Recreation website. (http://dnr.alaska.gov/parks/asp/access.htm)
- Information about the Federal Aid in Sport Fish Restoration program can be found on the U.S. Fish & Wildlife Service website. (http://wsfrprograms.fws.gov/home.html)
- Information pertaining to legal public access to the states land and water can be found here in the Legal Access section of the ADF&G website.
- Accessible Fishing - Mobility Impaired Access Points (*PDF 113 kB*)
- Lake Maps Series

Alaska Chapter SCI
PO Box 770511
Eagle River, AK 99577
(907) 980-9018

March 1, 2012

The Honorable Steve Thompson, Chair
Alaska State House
Special Committee on Fisheries
State Capitol, Room 428
Juneau, AK 99801

Dear Representative Thompson,

SCI Alaska Chapter is the leading hunter-conservationist organization in the world, as well as here in Alaska. It is our mission to promote conservation of species and the freedom to hunt. Our record here in Alaska clearly illustrates our commitment to that mission from leading the fight against anti-hunters at the ballot box to leading the wood bison restoration project, we are as our motto says, "First for Hunters".

We are writing today to express our support for HCR 25 regarding the commemoration of the Wildlife Restoration Act. This act was made possible by the tireless work of hunter-conservationists who requested that the hunting community be taxed to pay for wildlife. It would be well to remember that this request came during the Great Depression when many Americans were facing financial hardship. Despite that obstacle, hunters pursued and won the creation of the Wildlife Restoration Act agreeing to pay a tax in order to support wildlife conservation.

We ask you as you consider this legislation to remember that we hunters support the user pay system and feel that it is more than fitting the creation of that system be recognized by HCR 25. Please pass this resolution from your committee at your earliest convenience.

Sincerely,

Terry C. Holliday

Terry Holliday
President

cc: Rep. Mark Neuman

SCI's Top Gun Chapter

HJR

8

<TARGET><BILL>HJR 8</BILL><SUBJECT>HJR
8</SUBJECT><COMM>HFSH27</COMM></TARGET>

Representative Scott Jiu Wo Kawasaki

Alaska State Legislature District 9 Fairbanks

Sponsor Statement for HJR 8

"Urging the United States Food and Drug Administration to Deny an Application to Sell Genetically Engineered Salmon in the United States"

House Joint Resolution 8 (HJR8) is introduced to urge the United States Food and Drug Administration (FDA) to deny any application to sell genetically engineered salmon in the United States. HJR8 also calls on Congress to enact product labeling requirements that include the words "Genetically Modified" which are prominently displayed on the package if the application is approved by the FDA.

Recently, the FDA held hearings to approve a hybrid Atlantic salmon as the first genetically engineered animal for human consumption. The FDA's consideration for approval of this "frankenfish" is a risky precedent and a threat to Alaska's wild salmon. The hybrid Atlantic salmon has been engineered by crossing Chinook salmon growth genes and an antifreeze gene from an eel, the ocean pout. The genes allow the new creation dubbed the AquAdvantage salmon to grow about twice as fast as its natural cousin.

Salmon farms in Canada, Europe and South America have been criticized for crowded conditions, fecal contamination, use of chemicals, proliferation of disease and escapees. Atlantic salmon have been caught in Alaska's waters, escaping from neighboring fish farms in British Columbia; many infested with sea lice. They are considered an invasive species by Alaskans.

HJR 8 will send the clear message to the Federal Government, Alaska's Congressional Delegation, the Food and Drug Administration and President Obama that the Alaska State Legislature does not condone the growth, sale or release of genetically engineered salmon in the United States. Please join me in supporting House Joint Resolution 8 and help make Alaska's salmon safe.

Representative Scott Jiu Wo Kawasaki

Alaska State Legislature District 9 Fairbanks

M E M O R A N D U M

Date: Thursday, February 03, 2011

To: Representative Steve Thompson, Chair
House Special Committee on Fisheries

From: Representative Scott Kawasaki

RE: House Joint Resolution 8

I respectfully request that you schedule a hearing in the House Fisheries Committee for HJR 8 "Urging the United States Food and Drug Administration to Deny an Application to Sell Genetically Engineered Salmon in the United States and Urging that Product Labeling Requirements Include the Words "Genetically Modified" Prominently Displayed on the Front of the Package if the Application is Approved by the United States Food and Drug Administration."

A copy of the resolution, a sponsor statement and additional support materials are attached.

There are several people who wish to testify from various locations around the state and nation. Please provide teleconferencing capabilities in Fairbanks, Anchorage and Mat-Su Legislative Information Offices.

If you have any questions or need additional information, please call Jos Govaars at 465-6890.

In Juneau ○ State Capitol Juneau, Alaska 99801
In Fairbanks ○ 1292 Sadler Way Fairbanks, Alaska 99701
Juneau ○ (907) 465-3466 ○ Fax (907) 465-2937 ○ **Fairbanks** ○ (907) 456-7423 ○ Fax (907) 451-9293
Email: Representative_Scott_Kawasaki@legis.state.ak.us

HOUSE JOINT RESOLUTION NO. 8

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-SEVENTH LEGISLATURE - FIRST SESSION

BY REPRESENTATIVES KAWASAKI, Miller, Peggy Wilson, Kerttula, Thompson

Introduced: 1/18/11
Referred: House Special Committee on Fisheries, Resources

A RESOLUTION

Urging the United States Food and Drug Administration to deny ~~an~~ any application to sell genetically engineered salmon in the United States; urging compliance with the provision of P.L. 110-85 (Food and Drug Administration Amendments Act of 2007) that requires the Commissioner of Food and Drugs to consult with the National Marine Fisheries Service of the National Oceanic and Atmospheric Administration regarding a report on environmental risks associated with genetically engineered seafood products; and urging that product labeling requirements include the words "Genetically Modified" prominently displayed on the front of the package if the application is approved by the United States Food and Drug Administration.

BE IT RESOLVED BY THE LEGISLATURE OF THE STATE OF ALASKA:

WHEREAS an application has been submitted to the United States Food and Drug Administration to market genetically engineered salmon for human consumption in the United States; and

WHEREAS this is the first genetically engineered animal intended to be used as food in the United States; and

WHEREAS a biological opinion issued by the United States Fish and Wildlife Service and the National Marine Fisheries Service of the National Oceanic and Atmospheric Administration to the United States Army Corps of Engineers in 2003 expresses concerns that transgenic salmon would threaten and adversely affect wild Atlantic salmon, currently on the Endangered Species List; and

WHEREAS federal agencies are required by 16 U.S.C. 1536(a) (sec. 7 of the Endangered Species Act) to consult with fisheries agencies when an action may affect a protected species; and

WHEREAS the applicant proposes fertilization and incubation on Prince Edward Island, Canada, and shipment of the eyed-eggs to Panama for grow-out and processing, all processes that would occur outside the jurisdiction of the United States; and

WHEREAS the applicant proposes shipment of processed fish to the United States for retail sale; and

They are out there!

WHEREAS the proposed activities pose a threat to wild salmon in the Pacific Northwest and Alaska; and

WHEREAS genetically engineered fish has not been the subject of thorough scientific research and testing to ensure that its consumption by humans is safe in the long term; and

WHEREAS many consumers of wild salmon purchase the product for its widely recognized health benefits, and lack of testing could weaken consumer confidence in all salmon products; and

WHEREAS the state's wild seafood industry, which is extremely important to the state and local economies, could be severely affected by the sale of genetically engineered salmon;

BE IT RESOLVED that the Alaska State Legislature urges the United States Food and Drug Administration to deny an application to sell genetically engineered salmon in the United States; and be it

FURTHER RESOLVED that the Alaska State Legislature urges compliance with the provision of P.L. 110-85 (Food and Drug Administration Amendments Act of 2007) that requires the Commissioner of Food and Drugs to "consult with the Assistant Administrator of

the National Marine Fisheries Service of the National Oceanic and Atmospheric Administration to produce a report on any environmental risks associated with genetically engineered seafood products, including the impact on wild fish stocks"; and be it

FURTHER RESOLVED that, if the application is approved by the United States Food and Drug Administration despite strong environmental and human health concerns, product labeling requirements should include the words "Genetically Modified" prominently displayed on the front of the package.

COPIES of this resolution shall be sent to the Honorable Barack Obama, President of the United States; the Honorable Joseph R. Biden, Jr., Vice-President of the United States and President of the U.S. Senate; the Honorable John Boehner, ~~Minority~~ Speaker of the U.S. House of Representatives; the Honorable Timothy F. Geithner, United States Secretary of the Treasury; the Honorable Tom Vilsack, United States Secretary of Agriculture; Margaret A. Hamburg, M.D., Commissioner of Food and Drugs, United States Food and Drug Administration; and the Honorable Lisa Murkowski and the Honorable Mark Begich, U.S. Senators, and the Honorable Don Young, U.S. Representative, members of the Alaska delegation in Congress.

FISCAL NOTE

STATE OF ALASKA
2011 LEGISLATIVE SESSION

Fiscal Note Number
Bill Version: **HJR 8**
() Publish Date

HJR8-LEG-COU-2-9-11
Title: "Oppose Genetically Engineered Salmon."
Sponsor: Representative Scott Kawasaki
Requester: House Special Committee on Fisheries, Resources

Dept. Affected: Legislature
Appropriation: Legislative Council
Allocation: Council and Subcommittees
OMB Component Number: 783

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information					
OPERATING EXPENDITURES	**FY 2012**	**FY 2012**	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**
Personal Services							
Travel							
Contractual							
Supplies							
Equipment							
Grants & Claims							
Miscellaneous							
TOTAL OPERATING	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
CAPITAL EXPENDITURES							
CHANGE IN REVENUES							

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts							
1003 GF Match							
1004 GF							
1005 GF/Program Receipts							
1037 GF/Mental Health							
Other Interagency Receipts							
TOTAL	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Estimate of any current year (FY2011) cost

POSITIONS

Full-time							
Part-time							
Temporary							

Why this fiscal note differs from previous version

This Legislation has zero fiscal impact on the Legislative Affairs Agency.

Prepared by: Shane Miller, Finance Manager — Phone 465-6626
Division: Administrative Services Division — Date/Time 2/9/11 1:15 PM
Approved by: Pamela Varni, Executive Director — Date 2/9/2011
Legislative Affairs Agency

(Revised 12/29/2010 OMB)

Analysis

This fiscal note has zero impact on the Legislative Affairs Agency.

Congress of the United States

Washington, DC 20510

February 8. 2011

The Honorable Mike Chenault
Speaker
Alaska State House of Representatives
State Capitol Room 208
Juneau AK, 99801

Dear Speaker Chenault:

Alaska's Congressional delegation supports passage of House Joint Resolution 8 (HJR8) to urge the United States Food and Drug Administration (FDA) to deny any application to sell genetically engineered salmon in the United States. HJR8 also calls on Congress to enact product labeling requirements to include the words "Genetically Modified" prominently displayed on the package if the application is approved by the FDA.

HJR8 would support comparable legislation now pending before the U.S. Senate and House of Representatives and send a clear signal of disapproval of "frankenfish" by the Alaska State Legislature.

The FDA's consideration of a hybrid Atlantic salmon as the first genetically engineered animal for human consumption is a risky precedent and a threat to Alaska's wild salmon. The genes allow the creation to grow about twice as fast as its natural cousin and raise serious questions about the potential impacts of this engineered species on human health, wild salmon and its habitat, and the economy of coastal fishing communities.

The FDA process to review this proposal has taken place mostly behind closed doors, without meaningful consultation with the National Marine Fisheries Service and leaves much to be desired.

Alaska was correct in banning finfish farming in state waters over 20 years ago and instead focusing its attention on the sustainable management of wild salmon stocks. Last summer's harvest of 169 million salmon worth $534 million to fishermen demonstrates the productivity and economic value of Alaska's wild salmon.

Salmon farms in Canada, Europe and South America have been criticized for crowded conditions, contamination, use of chemicals, proliferation of disease and escapees. Atlantic salmon have been caught in Alaska's waters after escaping from neighboring fish farms in British Columbia with many infested with sea lice. They are rightly considered an invasive species by Alaskans.

HJR8 will send a clear message to the Food and Drug Administration and President Obama that the Alaska State Legislature does not condone the growth, sale or release of genetically engineered salmon in the United States.

We applaud the leadership of Representatives Scott Kawasaki, Bob Miller, Peggy Wilson, Beth Kerttula, and Steve Thompson in this matter and urge full passage of HJR8 by the Alaska State Legislature.

Sincerely,

Lisa Murkowski
United States Senator

Mark Begich
United States Senator

Don Young
Congressman

Cc: Alaska State House of Representatives

UNITED FISHERMEN OF ALASKA

211 Fourth Street, Suite 110
Juneau, Alaska 99801-1172
(907) 586-2820
(907) 463-2545 Fax
E-Mail: ufa@ufa-fish.org
www.ufa-fish.org

February 4, 2011

Representative Steve Thompson, Chairman
House Special Committee on Fisheries
Alaska State Legislature
State Capitol, 120 Fourth Street
Juneau, AK 99801-1182

Dear Chairman Thompson and Committee Members,

United Fishermen of Alaska supports bill HJR 8.

UFA is on record with the U.S Food and Drug Administration (FDA) in opposition to approval of genetically modified salmon for production and consumption in the U.S. However, if approved for production and consumption in this country., we have strongly requested that FDA regulations require that salmon or any other genetically modified seafood products be clearly labeled as such.

Alaska has world-leading sustainable fishery management practices and we have gone to great effort and expense to differentiate our seafood products in the marketplace. We are very concerned that, if genetically modified salmon is allowed to be sold in the U.S. at all or not labeled clearly if allowed, Alaska fishermen and coastal communities will suffer job losses and economic hardship due to consumer confusion about the wholesomeness of salmon in general.

United Fishermen of Alaska represents 38 Alaska Commercial fishing organizations, and hundreds of individual fishermen and related businesses. We support HJR8 and thank you for your attention to this matter.

Sincerely,

Mark Vinsel
Executive Director

MEMBER ORGANIZATIONS

Alaska Bering Sea Crabbers • Alaska Crab Coalition • Alaska Independent Fishermen's Marketing Association
Alaska Independent Tendermen's Association • Alaska Longline Fishermen's Association • Alaska Scallop Association • Alaska Trollers Association
Alaska Whitefish Trawlers Association • Aleutian Pribilof Islands Community Development Association • Armstrong Keta • At-sea Processors Association
Bristol Bay Reserve • Bristol Bay Regional Seafood Development Association • Cape Barnabas Inc. • Concerned Area "M" Fishermen
Cook Inlet Aquaculture Association • Cordova District Fishermen United • Crab Group of Independent Harvesters • Douglas Island Pink and Chum
Fishing Vessel Owners Association • Groundfish Forum • Kenai Peninsula Fishermen's Association • Kodiak Regional Aquaculture Association
North Pacific Fisheries Association • Northern Southeast Regional Aquaculture Association • Petersburg Vessel Owners Association
Prince William Sound Aquaculture Corporation • Purse Seine Vessel Owner Association • Seafood Producers Cooperative
Southeast Alaska Herring Conservation Alliance • Southeast Alaska Fisherman's Alliance • Southeast Alaska Regional Dive Fisheries Association
Southeast Alaska Seiners • Southern Southeast Regional Aquaculture Association • United Catcher Boats • United Cook Inlet Drift Association
United Southeast Alaska Gillnetters • Valdez Fisheries Development Association

From: bobsal@gci.net
Sent: Wednesday, February 02, 2011 12:45 PM
To: Rep. Scott Kawasaki
Subject: GMOs and Frankenfish

Categories: GM Fish Bill

Dear Mr. Kawasaki,
This is in response to your note to me about my letter to the editor on GMOs.
Here are two great sites regarding GMOs, both involving Jeffrey Smith, an expert on the subject.
The discussion mainly revolves around the big chemical companies and seed involvement.
The results from seed modification is disastrous and there is no reason to believe messing around with the genetics of fish will have a different outcome.
The greed by both the chemical companies and our federal involvement has the potential for great harm to the world's people, not just American's.

On a different note from GMOs is the USDA Food Guidelines for the American Diet. Government involvement thirty to fifty years ago has lead to the increased health problems of cancer, diabetes, obesity and mental health problems. They still cannot see the forest for the trees, as to the problem, blaming the people, instead of the high carbohydrate and low-fat recommendations. This problem should be investigated by legislators as it would go a long way to solving the high expense of healthcare.

I am thankful for the interest by a legislator. Sincerely, Sally Stuart

http://www.responsibletechnology.org
The Institute for Responsible Technology (IRT)
The Institute for Responsible Technology is a world leader in educating policy makers and the public about genetically modified (GM) foods and crops. We investigate and report their risks and impact on health, environment, the economy, and agriculture, as well as the problems associated with current research, regulation, corporate practices, and reporting.

http://www.seedsofdeception.com/Public/Home/index.cfm
International bestselling author Jeffrey M. Smith is the leading spokesperson on the health dangers of Genetically Modified Organisms (GMOs). He documents how the world's most powerful Ag biotech companies bluff and mislead critics, and put the health of society at risk. At this site is a video well worth the time to watch.

There are a myriad links to good sites regarding how wrong the USDA Guidelines are. These are just a start to get your interest.
http://www.hulu.com/watch/196879/fat-head this movie explains in a humorous but accurate way how wrong the current recommendations are by the USDA.
Many bloggers have a scientific background and are up to date on the documented research, whereas, doctors seem to be indoctrinated in the low carb theory from medical school and not open minded.
http://www.fathead-movie.com/index.php/2011/02/01/fat-kids-and-thermodynamics/ blog: by Tom Naughton
http://www.westonaprice.org/ Sally Fallon

From: litsaofalaska@yahoo.com
Sent: Friday, January 21, 2011 5:15 PM
To: Rep. Scott Kawasaki
Subject: Please Introduce Bill to Label GMO Foods

Categories: GM Fish Bill

evangelia vlasakakis
1601 hilton avenue
fairbanks, AK 99701-4017

January 21, 2011

The Honorable Scott Kawasaki
Alaska House of Representatives
State Capitol
Juneau, AK 99801-1182

Dear Representative Kawasaki:

Like most consumers, I want to avoid foods that contain genetically modified organisms, but they are not labeled.

In fact, the federal government does nothing to regulate, or guarantee the safety of, agricultural crops -- and now food animals -- that have been altered with foreign genes. There has never been a longitudinal scientifically rigorous health study on the impacts of eating genetically altered foods.

The little science there is shows that GMOs are more likely to trigger novel allergies, are less nutritious, sprayed with more herbicides, and contain elevated levels of hormones that correlate with common cancers.
And, there's no doubt that the most common GMO foods are linked to epidemic levels of obesity and diet-related diseases. These include artery-clogging meat and milk products from animals fed GMO grains, trans fats from GMO vegetable oils, and high fructose (GMO) corn syrup.

Public health depends on labeling GMO foods so consumers can avoid them.
Mandatory GMO labels are popular with consumers, consistently earning polling numbers politicians dream of.

I am hoping that you and your colleagues in the state legislature can help. Please stand up for consumers' right to know and truth in labeling by introducing a bill to label GMO foods this year.

I look forward to hearing from you on this important topic.

Sincerely,

evangelia vlasakakis

From: Kristine Niles [krniles@alaska.edu]
Sent: Wednesday, February 09, 2011 4:08 PM
To: Rep. Scott Kawasaki
Subject: thank you for taking on the farmed salmon propositions

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: GM Fish Bill

Scott,
I thank you for introducing bills that will protect our wild salmon from the potential ravages of farming and hybridizing salmon. It has happened time and again that by farming salmon- inevitably some escape and decimate the local populations of salmon because they are usually much more aggressive hybrid salmon species or they introduce pathogens that in turn decimate the local salmon populations through infection, and yet companies continue to farm salmon.

Dipnetting at Chitna is my family's main source of meat throughout the year. It is a healthy source of omega-3's and they have such low mercury levels that I can eat them throughout my pregnancy. It is vital to my family that the salmon remain strong and healthy!

I also support your efforts to ensure that all genetically modified salmon along with farmed salmon are required to be labeled as such. I, for one, will always purchase wild salmon over farmed or genetically modified.

Thank you for fighting to maintain out wild Alaskan salmon populations,
Kristine Niles
--
Kristine Niles, B.S.
Nutrition Research Technician
Center for Alaska Native Health Research
University of Alaska Fairbanks
(907)474-5486

From: sltack63@hotmail.com
Sent: Thursday, January 13, 2011 2:49 PM
To: Rep. Scott Kawasaki
Subject: Please Introduce Bill to Label GMO Foods

Categories: GM Fish Bill

Stephen Tack
304 Noyes St.
Fairbanks, AK 99701-3045

January 13, 2011

The Honorable Scott Kawasaki
Alaska House of Representatives
State Capitol
Juneau, AK 99801-1182

Dear Representative Kawasaki:

Like most consumers, I want to avoid foods that contain genetically modified organisms, but they are not labeled.

In fact, the federal government does nothing to regulate, or guarantee the safety of, agricultural crops -- and now food animals -- that have been altered with foreign genes. There has never been a longitudinal scientifically rigorous health study on the impacts of eating genetically altered foods.

The little science there is shows that GMOs are more likely to trigger novel allergies, are less nutritious, sprayed with more herbicides, and contain elevated levels of hormones that correlate with common cancers.
And, there's no doubt that the most common GMO foods are linked to epidemic levels of obesity and diet-related diseases. These include artery-clogging meat and milk products from animals fed GMO grains, trans fats from GMO vegetable oils, and high fructose (GMO) corn syrup.

Public health depends on labeling GMO foods so consumers can avoid them.
Mandatory GMO labels are popular with consumers, consistently earning polling numbers politicians dream of.

I am hoping that you and your colleagues in the state legislature can help. Please stand up for consumers' right to know and truth in labeling by introducing a bill to label GMO foods this year.

I look forward to hearing from you on this important topic.

Sincerely,

Stephen Tack

From: nis@mosquitonet.com
Sent: Wednesday, February 09, 2011 7:42 PM
To: Rep. Scott Kawasaki
Subject: GE Salmon

Categories: GM Fish Bill

Scott, Sen Begich has introduced S 230 to ban genetically engineered salmon so if this becomes federal law it should solve the problem. But i agree that any genetically engineered food if approved, should be conspicuously labeled as such so the public can make the decision to buy or not to buy the product. If the feds won't establish this requirement, the state should for sale of such products in AK.

Thanks for your service.

Herbert R.Melchior
nis@mosquitonet.com

print

Banning GMOs

by Sally Stuart, North Pole
01.11.11 - 12:13 am
Letter to the Editor

Hour For Food

Jan. 7, 2011

To the editor:

How do we stop the genetic engineering of our food supply? First, the public has to be made aware of the dangers of genetically modified organisms.

The FDA has left it up to Monsanto to do its own safety testing and accepts the results. The vast majority of Americans would not buy GMOs if they were labeled as such. Economics would eliminate the problem. Who knows what the future holds for people eating GMOs?

Evidence is strong that GMOs for animals are catastrophic.

The seeds involved are soybeans, corn, canola, cottonseed and sugar beets. These foods are in everything, especially processed foods. Our dairy, poultry and meat animals are affected, as they are fed these grains.

Monsanto, Syngenta, Bayer, Dow and DuPont have bought more than 200 other seed companies, allowing them to dominate access to seeds.

Monsanto's motto is "No Food Shall Be Grown That We Don't Own."

The takeover has made it difficult for farmers to find natural seeds. In 1999, with the help of Arthur Anderson (Enron fame), Monsanto designed a plan to have the world use 100 percent of all commercial seeds genetically modified and patented by them in 15-20 years.

They developed strategies and tactics to achieve this aim. They want dominance in a world in which natural seeds would become extinct.

Monsanto has been ruthless. Following are two sites to follow up on and learn about this subject: www.seedsofdeception.com and www.responsibletechnology.org.

Scientists have been threatened, blackballed and fired. Government agencies have been infiltrated, and they have seized control. This has happened around the world.

However, the European Union, Australia and a few more countries have banned GMOs.

There are 65 health risks from GMOs. We need to insist the biochemistry industry take each of those risks and prove each is not harmful with independent

data.

Think over the last 20 years about changes happening to people in greater numbers: infertility, food allergies, autism, autoimmune diseases. Now "frankenfish" is in the news, another attempt to mess with our food.

People need to be informed of the truth about our food supply. The FDA has been grossly negligent.

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Alaska Fun Center
1817 College Road
Fairbanks, AK 99709

www.alaskafuncenter.com

Fax Transmission

☐ Please call to confirm receipt

☐ Please respond by return fax

☐ Call only if transmission is incomplete

Date: 1/5

To: Scott Kawasaki

Fax number: 456-3346

From: Bill Larry

Our phone: (907) 452-3465
Our fax: (907) 451-8134

1 **# of pages including cover page:**

Notes:

Just wanted to clarify. I would like the "Bill" to state that Any genetic manipulation, adding chromosones, genes or gene splicing will not be allowed. We don't want to give Fish & Game a way to manipulate or get around the intent of the "Bill".

Lets remember these are the guys who can't even get their filters to work at the new Fort. hatchery.

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration
Silver Spring, MD 20993

December 6, 2010

Representative Scott Kawasaki
Alaska State Legislature, Interior Delegation
State Capitol, Room 428
Juneau, AK 99801-1182

Dear Representative Kawasaki:

Thank you and Senators Joe Thomas, Albert Kookesh, and Joe Paskvan and Representatives Woodie Salmon, Mike Kelly, and David Guttenberg for the letter dated October 4 concerning AquAdvantage Salmon. We share your view that this product is of particular public interest. The Food and Drug Administration (FDA or the agency) is committed to a thorough review process that is transparent to the public and comprehensive in its attention to safety for humans, for animals, and for the environment.

FDA regulates genetically engineered (GE) animals under the new animal drug provisions of the Federal Food, Drug, and Cosmetic Act. Legally, the genetic material, or rDNA construct, used to engineer the salmon, meets the definition of a drug because it is intended to affect the structure or function of the animal. This regulatory pathway prohibits introducing food from the AquAdvantage Salmon into the United States without specific FDA approval. As part of the approval process, the producer of the GE salmon with the rDNA construct must meet safety standards not only for the animal, but also for the environment and for any food derived from the animal.

Environmental Safety

With regard to the environment, FDA's regulations implement the National Environmental Policy Act (NEPA), and require the agency to assess the environmental impact of an approval. For AquAdvantage Salmon, this requirement has meant evaluating the sponsor's plans for preventing the escape or breeding of the genetically engineered salmon by use of multiple, redundant systems of mechanical, biological, and geographical containment. These include the production of single sex, sterile populations of genetically engineered salmon by AquaBounty, and keeping them contained in inland tanks in areas unsuitable for survival outside the facility. With on-going consultation with sister agencies such as the National Oceanic and Atmospheric Administration, FDA will analyze the possibility of escape, survival, and breeding as part of its determination of the likelihood of any significant impact on the environment, including on populations of wild salmon. The specific conditions of use being considered by the agency are described in our briefing materials were made available to the public before the found at our Web site at:

http://www.fda.gov/downloads/AdvisoryCommittees/CommitteesMeetingMaterials/VeterinaryMedicineAdvisoryCommittee/UCM224762.pdf.

If this application were to be approved, it would be approved only for the particular conditions of use specified in the application. If the sponsor wishes to make any changes in location, in containment systems, or in the genetic alteration, then a new application and environmental assessment will be required, and will be subject to the same rigorous safety standards.

Food Safety

In addition to adherence to our statutory and regulatory requirements to demonstrate food safety as outlined in our guidance for industry, (http://www.fda.gov/downloads/AnimalVeterinary/GuidanceComplianceEnforcement/GuidanceforIndustry/UCM113903.pdf), FDA's review is also consistent with internationally-adopted scientific consensus guidelines for the food safety assessment of foods from GE animals as outlined by the Codex Alimentarius, (http://www.codexalimentarius.net/download/standards/11023/CXG_068e.pdf). FDA conducts on-site inspections to ensure (among other things) the accuracy of the data submitted pursuant to these studies. In addition to information from studies conducted by the sponsor, the agency reviews relevant studies from peer-reviewed journals. FDA reviewers use this combination of materials to reach an independent judgment on the safety of any changes caused by the genetic construct.

FDA also considers specific food safety issues, such as allergenicity. Because salmon are finfish, which as a group are among the eight most allergenic foods in the United States, the AquAdvantage Salmon would likely cause allergic reactions in anyone who is already allergic to conventionally bred salmon. FDA is looking closely at the biology of the GE salmon to determine if there is cause to believe the AquAdvantage Salmon would pose additional allergy issues for persons who at present eat salmon safely.

FDA's Review Process

The AquAdvantage Salmon review has followed the procedure described in Guidance for Industry 187, "Regulation of Genetically Engineered Animals Containing Heritable Recombinant DNA Constructs," which was issued in final form in 2009 after public comment.

Key steps to date have included:

- Web publication of background documents on August 25, 2010. These documents contained detailed information on the review process, on the AquAdvantage Salmon, and on the ecology and biology of salmon in general. They presented a summary of all the information and data on which FDA relied for its analyses to date, and an explanation for the preliminary conclusions it would present to an advisory committee for discussion. See http://www.fda.gov/NewsEvents/PublicHealthFocus/ucm224089.htm for these documents.

- FDA held a public Veterinary Medicine Advisory Committee (VMAC) meeting, on September 19-20, 2010. Members of the public were invited to provide written comments for the committee and to make oral presentations.

- FDA had a second meeting, on September 21, 2010, to offer the public a chance to engage in a focused discussion on requirements for food labeling and how they might apply to foods derived from AquAdvantage Salmon in the event that the agency approves AquaBounty's application. Members of the public were invited to speak at the labeling meeting, and to submit written comments both before and after the meeting. Written comments were accepted for 60 days following the labeling meeting (until November 22).

FDA has not made a decision on the AquAdvantage Salmon application. The agency's next steps entail a review of the VMAC meeting discussions and any new information brought to the agency's attention, as well as completion of the environmental review and analysis.

If FDA's environmental review results in a proposed finding of no significant impact (FONSI), the agency will publish a *Federal Register* notice to announce the availability of the environmental assessment and the FONSI, and invite public comment on these documents for 30 days.

If FDA decides to prepare an environmental impact statement (EIS), either initially or after reviewing public comment on a proposed FONSI, the public will have an opportunity to participate in the EIS development process. Either of these actions must be completed before the new animal drug application could be approved.

Food Labeling

If FDA approves the AquAdvantage Salmon, the agency will have to decide on the question of labeling food from the salmon. The September 21 meeting provided a chance for members of the public to learn about the relevant food labeling principles and federal court decisions. These were summarized in a background document available at: http://www.fda.gov/Food/LabelingNutrition/FoodLabelingGuidanceRegulatoryInformation/Topic-SpecificLabelingInformation/ucm222608.htm.

FDA may require special labeling for "material" differences, such as nutritional content or range of uses (e.g., usability for frying). But as interpreted by the courts to date, the fact that a food comes from a GE source does not trigger mandatory food labeling absent a material change in the food itself. Food labels are geared to informing consumers about the attributes of the product, not about the production method. As a result, it has been held that consumer interest alone is not sufficient for FDA to force a manufacturer to put something on the label.

Manufacturers are free, however, to offer information to consumers provided it is truthful and not misleading. Therefore, if food from this salmon is permitted for sale in the United States, sellers will be free to label the foods as GE or non-GE to meet consumer demand, provided it is truthful and not misleading. This is similar to the system used for other foods, in which terms such as "natural" are used on voluntary basis to meet a growing consumer interest in the

information, whether or not the foods have attributes that could trigger a mandatory labeling requirement.

Thank you again for your interest in this matter. If you have any further questions or concerns, please let us know.

Sincerely,

Margaret A. Hamburg, M.D.
Commissioner of Food and Drugs

Cc: Senator Joe Thomas, Alaska State Legislature, Interior Delegation
Senator Albert Kookesh, Alaska State Legislature, Interior Delegation
Senator Joe Paskvan, Alaska State Legislature, Interior Delegation
Representative Woodie Salmon, Alaska State Legislature, Interior Delegation
Representative Mike Kelly, Alaska State Legislature, Interior Delegation
Representative David Guttenberg, Alaska State Legislature, Interior Delegation

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
One Blackburn Drive
Gloucester, MA 01930-2298

NOV 19 2003

Christine Godfrey
Chief, Regulatory Branch
Construction/ Operations Division
New England District, Corps of Engineers
696 Virginia Road
Concord, Massachusetts 01742-2751

Ref: Transmittal of Final Biological Opinion and Response to Comments on Draft F/NER/2002/00936

Dear Ms. Godfrey:

Enclosed is a biological opinion (Opinion) issued by the National Marine Fisheries Service (NOAA Fisheries) on the U.S. Army Corps of Engineers (ACOE) proposed continuation and modification of existing permits authorizing the installation and maintenance of net pens to raise finfish off the coast of Maine. The NOAA Fisheries national Section 7 tracking number is F/NER/2002/00936.

The Opinion is submitted in accordance with section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). This Opinion concludes that the proposed continuation and modification of existing permits authorizing the installation and maintenance of fish pens in the state of Maine (including incorporation of the special conditions to protect the Gulf of Maine Distinct Population Segment (DPS) of Atlantic salmon) may adversely affect but is not likely to jeopardize the continued existence of the endangered Atlantic salmon within the DPS. Please note that any changes to the proposed action, including any changes to the special conditions proposed to protect wild Atlantic salmon, may change the conclusion in this Opinion and would warrant further Section 7 consultation. No other federally-listed species is likely to be affected by the proposed action.

While the ACOE's proposed permit modifications do contain conditions for the protection of wild Atlantic salmon, the incorporation of these conditions does not eliminate the potential for the permitted activities to result in "take" of Atlantic salmon within the DPS; therefore, an Incidental Take Statement (ITS) has been issued with this Opinion. The anticipated incidental take from the existing aquaculture industry's marine sites that were the subject of this consultation (42 sites) is the detection at weirs or traps of up to 21 escaped fish per year, based on a three year rolling average. If the ITS is exceeded, consultation must be reinitiated. To validate the ITS, the ACOE must implement the non-discretionary Reasonable and Prudent Measures contained therein. Discretionary Conservation Recommendations are also included with this Opinion.

Reinitiation of this consultation is required if: (1) the amount or extent of taking specified in the ITS is exceeded; (2) new information reveals effects of these actions may affect listed species or critical habitat in a manner or to an extent not previously considered; (3) project activities are subsequently modified in a manner that causes an effect to the listed species that was not considered in this Opinion; (4) significant changes to the proposed action are made that may change the conclusion in this Opinion; or (5) a new species is listed or critical habitat designated that may be affected by the identified actions. If any one of the conditions requiring reinitiation of consultation is triggered, the ACOE should contact NOAA Fisheries. Alternatively, NOAA Fisheries may provide written advice to the ACOE relative to the need to reinitiate consultation. Requests for reinitiation must be in writing and must contain sufficient information to record the nature of the change in the action or its effects and the rationale for any modifications.

Conclusion

NOAA Fisheries greatly appreciate your cooperation during this Section 7 consultation. If you have any questions concerning this Opinion, please contact Jessica Anthony of my staff at (978) 281-9328 ext 6532. We look forward to working with you in the future to ensure compliance with permit conditions and protection of the Atlantic salmon DPS.

Sincerely,



Patricia A. Kurkul
Regional Administrator

cc:
Jessica Anthony - NOAA Fisheries
Rick Bennett - USFWS
Wende Mahaney - USFWS

THE CENTER FOR
FOOD SAFETY

February 10, 2011

Testimony to Alaska House of Representatives on House Joint Resolution 8 (HJR8)

Jaydee Hanson
Senior Policy Analyst

Good afternoon. My name is Jaydee Hanson and I am the Senior Policy Analyst for the Center for Food Safety, an organization based in Washington, D.C. that works to protect human health and the environment by curbing the proliferation of harmful food production technologies. Thank you for allowing me the opportunity to provide testimony today on this important and precedent setting decision.

Overview of Flawed Process

As you are aware, on August 25, 2010, U.S. Food and Drug Administration (FDA) officials announced their process for making a decision on an application relating to the first genetically engineered (GE) animal intended for human consumption, the AquAdvantage Salmon (AA Salmon) produced by Aqua Bounty Technologies. FDA held two back to back public meetings in September less than three weeks after announcing they would probably approve the application to discuss the AA Salmon. The first FDA meeting was a convening of the Veterinary Medicine Advisory Committee (VMAC) on September 19-20 to consider issues regarding the safety and effectiveness of the transfer of genes from two fish species into an Atlantic salmon as a "new animal drug" (NAD) that is the subject of the GE fish new animal drug application (NADA).[i] Unlike other animal drugs, these new "drugs" reside in every cell of the animal while it is eaten. The second meeting was a public hearing on September 21 to present the public with FDA's existing legal framework for food labeling, and to receive public input on whether food from GE Salmon should be labeled.[ii]

The decision-making process proposed by FDA failed to provide the public with sufficient time or available data that would have allowed for full and meaningful participation prior to the VMAC and labeling meetings. The exceedingly short timelines for public comment were exacerbated by the lack of transparency. AquaBounty filed a New Animal Drug (NAD) application for AquAdvantage salmon with FDA in 2001, yet the agency chose not to disclose any data relating to its decision until just 10 working days before the public meeting. Despite the short time line, some 79, 000 people wrote the FDA asking them not to approve the salmon.

FDA's announcement regarding its process is the first of its kind, for any GE food animal. Similarly the decision whether to label any such GE animal if approved will be a first. FDA and the VMAC recognize that whether or not to approve the first GE animal for use as food is a critical and precedent-setting decision. As such, the public must demand that FDA must require additional environmental and food safety data as well as gather as much information as possible about its next steps from all interested parties, especially the public.

The data the FDA provided to the public on food safety was altogether deficient given that the FDA had 10 years to review the product. The study on changes in the morphology of the new GE salmon involved only 12 fish. The limited study on possible allergic reactions involved only 6 fertile GE fish and 6 infertile GE fish. These small sample sizes are completely inadequate for a full review of the health and safety of these fish when they are raised in a commercial operation. The absence of data on disease resistance and inadequate nutritional composition data leave the safety of these animals largely unknown. Additionally, the Environmental Assessment (EA), a less comprehensive review, compiled by AquaBounty for the FDA is inherently flawed and does not take into account the full and broad range of impacts the approval of the GE salmon will have on the environment, such as what would happen if these fish escaped.

The VMAC raised many concerns during the public meeting regarding small sample sizes, incomplete data, questionable culling practices, the numerous physical abnormalities that may occur after fish reach market size and poor scientific assessments. Regarding the potential allergenicity, one Committee member noted "I don't have adequate evidence to determine if it's safe." This was followed by his colleague who said "the short answer as a professor is I don't know." In light of the numerous unknowns raised throughout the VMAC meeting, FDA officials announced that any approval will require post-market review and data requirements. Yet the VMAC expressed its concerns with FDA's plan to require post-market reviews as sufficient for gaps in current safety data. Post-market review and labeling are not an adequate substitution for proper regulation and safety assessments. Additionally, Dr. Gary Thorgaard, the only fisheries biologist on the committee, called on FDA to conduct a full Environmental Impact Statement, a sentiment reiterated by other members of the Committee.

Human Health Risks of Genetically Engineered Salmon

We are very concerned about the potential toxicity, allergenicity, and diseases posed by the commercialization of transgenic fish. While data on human health impacts of GE fish are sparse, especially since FDA has yet to share all the data it has reviewed, there is cause for concern. With regard to food allergies, FDA stated: "the technical flaws in this [AquaBounty's allergy] study so limit its interpretation that we cannot rely on its results."[iii] Additionally, AquaBounty salmon went largely untested for increased disease susceptibility, despite focal inflammations and elevated white blood cell counts suggestive of infection.[iv]

Disease is a massive problem in crowded farmed salmon operations, and increased susceptibility would mean unhealthy fish treated liberally with antibiotics, resistant bacteria, and antibiotic residues in fish [6].Some research suggests that transgenic fish may be susceptible to more diseases than fish currently grown in aquaculture facilities.[v] Consequently, the amount of antibiotics given to transgenic fish may be higher than the amount currently given to farmed fish; already farmed salmon are given more antibiotics than any other livestock by weight. Aqua Bounty Technologies provided no data on their antibiotic use with these fish. The absence of data on disease resistance and inadequate nutritional composition data leaves the safety of these animals largely unknown. By eating geneticially engineered farmed fish treated with more antibiotics humans will be ingesting antibiotics that may be harmful.[vi] Indeed, some antibiotics are toxic and can even cause fatal allergic reactions.[vii] Finally, if these genetically engineered fish increase the use of antibiotics in aquaculture, they would also exacerbate the significant problem of antibiotic resistant bacteria.

The potential human health concerns connected with the use of antibiotics in aquaculture, including the unique role transgenic fish may play in exacerbating such use, must be fully assessed by FDA.

A 2009 study commissioned by the European Union revealed that fish engineered to grow faster have a resultant high tolerance to environmental toxins.[viii] The study's authors expressed grave concerns that both toxins and growth hormones engineered into the fish had a high potential to end up in consumers' bodies, calling for further tests to determine safety.

Ecological Risks of Genetically Engineered Salmon

Genetically engineered fish pose serious risks to wild populations of fish and our marine environment. Each year millions of farmed salmon escape from open-water net pens, outcompeting wild populations for resources and straining ecosystems. We believe any approval of GE salmon would represent a serious threat to the survival of native salmon populations, many of which have already suffered severe declines.

Escaped GE salmon can pose an additional threat – genetic pollution resulting from what scientists call the "Trojan gene" effect. Research published in the *Proceedings of the National Academy of Sciences* notes that a release of just sixty GE fish into a wild population of 60,000 would lead to the extinction of the wild population in less than 40 fish generations. It could be inferred that the fish could also breed with Atlantic salmon being farmed in the Pacific Basin.

In addition to the threat of these GE salmon displacing native salmon populations, such farming of these GE salmon could encourage the propagation of deadly fish diseases, the concentration of harmful wastes and industrial drugs and chemicals escaping into open waters, and the over-fishing of vast quantities of non-commercial fish to feed carnivorous farmed fish, such as salmon; it generally takes three pounds of wild fish to grow one pound of farmed salmon[ix]. Since these salmon have been engineered for fast growth, it stands to reason that their feed requirements will be even higher.

Economic Risks to Fishermen

A potential escape of GE salmon will both directly and indirectly affect the livelihoods of the tens of thousands of salmon fishers and fishing communities in the U.S. and will have ripple effects throughout markets. In the Northeastern United States, wild Atlantic salmon is on the endangered species list and commercial fishing is prohibited. Therefore, the escape of GE salmon would pose serious risks to the restoration of wild populations of fish and any approval of GE fish will have direct and indirect effects on wild stocks as well as the fisheries themselves.

As you are well aware, in the Northwest the salmon industry is a paramount sector of the economy. The seafood industry in Alaska is the largest private sector employer creating 56,600 direct and 22,000 indirect jobs annually, more jobs than oil, gas and mining combined.[x] In 2007, the overall value of the Alaska seafood industry alone was over $1.5 billion paid to fishermen and $3.6 billion at the wholesale level. Total 2007 value at the dock for the non-Indian commercial salmon fisheries within Washington, Oregon and California was $11.6 million.[xi] Research published by Andrew Dyke and U. Rashid Sumaila notes that wild fisheries can also have significant economic impacts in other sectors, such as agriculture, forestry, manufacturing and financial services, observing that "changes in the fishing industry could affect livelihoods in and the viability of many economic sectors." The researchers found that regionally, every $1 of fisheries-sector output supports more than $3 of output throughout the North American economy.[xii] Many of Alaska's salmon processors are based in Seattle and elsewhere in Washington, Oregon or California, meaning that revenue and value is generated and spread across many states. At the same time, the increased demands by salmon farms for forage fish and fishmeal additionally affect the health of wild stocks and place an added stress on wild fisheries.

Additionally, the risk of market confusion or rejection resulting from GE salmon approval would have additional effects on the U.S. salmon and seafood industry. Consumer confusion about what types of salmon or seafood are genetically engineered may deter shoppers from purchasing such products. This confusion would be made worse by the absence of mandatory GE labeling requirements. Approving GE salmon is a sharp contradiction to the agreements the United States has signed at the North Atlantic Salmon Conservation Organization, where transgenic salmonids are considered a serious threat to wild salmon. Furthermore, GE salmon could result in trade disparities and the potential loss of foreign markets that may have differing opinions on labeling or safety assessments - for example in the EU, all GE animals must be labeled. Virtually, every European and Canadian fish farming association has announced that their members will not grow these GE salmon. If the US approves these GE salmon for growth in the US without labeling. Consumers will fear that every US salmon is genetically engineered. Concerns over potential food contamination or environmental impacts may also affect consumer choice in the U.S. which could lead to consumers' forgoing buying wild and farmed salmon altogether. A recent poll from Lake Research Partners found that 91 percent of Americans felt FDA should not introduce GE fish and meat into the marketplace.[xiii] A 2008 Consumer Reports poll found that 95 percent of respondents said they thought food from genetically engineered animals should be labeled.[xiv]

Labeling

To ensure meaningful public comment and confidence in the Agency's processes, the agency should have separately convened the labeling hearing, only if and after any initial decision on approval. To have a discussion about labeling presupposes that FDA has already made up its mind on the approval without proper input, yet even labeling is not an adequate substitution for proper regulation and safety assessments prior to approval. The deadline for comments on the labeling of the fish was Nov. 22, 2010 and this time some 400,000 people asked the FDA to require labeling. The public clearly wants these fish labeled.

Should FDA decide to approve the transgenic salmon despite overwhelming consumer opposition and potential threats to the environment, human health, and native salmon populations, mandatory labeling must be unconditional.

Conclusion

I would like to finish by expressing the Center for Food Safety's support for House Joint Resolution 8 (HJR8), which we feel takes the necessary strides toward protecting human health, the environment and Alaska's thriving fishing economy from the risks association with genetically engineered salmon.

Respectfully Submitted,

Jaydee Hanson

Senior Policy Analyst
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[i] Federal Register / Vol. 75, No. 165 / Thursday, August 26, 2010 / Notices/ pp. 52605. (Public VMAC Meeting)
[ii] Federal Register / Vol. 75, No. 165 / Thursday, August 26, 2010 / Notices/ pp. 52602. (Public Meeting on Labeling)
[iii] *AquAdvantage Salmon Briefing Packet for Veterinary Medicine Advisory Committee*, Center for Veterinary Medicine, Food and Drug Administration, Sept. 20, 2010, page 104

[iv] Briefing Packet, p. 41: "Comprehensive disease challenge tests have not been conducted on these fish." "An increased presence of focal inflammation in various tissue types in AquAdvantage salmon has the ***strongest correlation*** with the presence of the AquAdvantage construct [inserted gene] among the findings in this study. That these fish ***may*** have been immunocompromised as a result of seasonality ***or other factors*** confounds the interpretation of these findings." In other words, FDA waves off the strongest finding of difference between GE and control salmon with airy speculation, and fails to demand further study to clarify these "confounded" findings. In particular, FDA does not demand "comprehensive disease challenge" tests to determine, based on SCIENCE and DATA, whether these GE salmon are more susceptible to disease. This is inexcusable, particularly given peer-reviewed literature showing that salmon engineered with a growth hormone gene are more susceptible to a significant salmon pathogen (*Vibrio anguillarum*) that causes the devastating salmon disease vibriosis than non-GE salmon. See Jhingan et al (2003). "Disease resistance, stress response and effects of triploidy in growth hormone transgenic coho salmon," Journal of Fish Biology 63: 806-823. For elevated white blood cell (lymphocyte) counts, see p. 35, and Figure 5, p. 147).

[v] William Muir et al., Possible ecological risks of transgenic organism release when transgenes affect mating success: Sexual selection and the Trojan gene hypothesis, 96 PNAS 13853-13856, at 13853 (Nov. 23, 1999).

[vi] Rebecca Goldberg and Tracy Triplett. Murky Waters: The Environmental Effects of Aquaculture in the U.S. (p 44). Environmental Defense Fund (1997).

[vii] Id.

[viii] Centre for Aquaculture and Environmental Research. (2009) "Ecological Risk Assessment of Transgenic Salmon." Study commissioned by the European Union, the Swedish Research Council Formas and the University of Gothenburg. Vancouver, Canada.

[ix] Naylor et al, Effect of Aquaculture on World Fish Supplies. Nature, Vol.405, June 29, 2000, pg.1017-1024 and Dr. Rebecca Goldberg, Murky Waters: Environmental Effects of Aquaculture in the United States. Environmental Defense Fund, October 1997.

[x] Northern Economics of Anchorage (January 2009) *The Seafood Industry in Alaska's Economy*. Commissioned by the Marine Conservation Alliance, At-sea Processors Association and the Pacific Seafood Processors Association.

[xi] Pacific Fishery Management Council. 2008. *Review of 2007 Ocean Salmon Fisheries*. (Document prepared for the Council and its advisory entities.) Pacific Fishery Management Council, 7700 NE Ambassador Place, Suite 200, Portland, Oregon 97220-1384

[xii] Dyck, A.J. and U.R. Sumaila. 2010. Economic impact of ocean fish populations in the global fishery. *Journal of Bioeconomics*. DOI: 10.1007/s10818-010-9088-3 [See attached summary by PEW Environment Group]

[xiii] Lake Research Partners, Commissioned by Food and Water Watch. 9/20/10 http://documents.foodandwaterwatch.org/release-FWW-Omnibus.pdf

[xiv] Consumer Reports. 11/11/08 http://www.greenerchoices.org/pdf/foodpoll2008.pdf

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FDA ignored FWS and NOAA biological opinions on GMO salmon?

Alaska Dispatch

Documents released in October indicate the The U.S. Fish and Wildlife Service and NOAA's National Marine Fisheries Service issued biological opinions that growing genetically modified salmon in marine net pens would pose a threat to wild Atlantic salmon protected under the Endangered Species Act and should be prohibited. A FOIA request by the Center for Food Safety, a non-profit group which says its mission is "to protect human health and the environment by curbing the use of harmful food production technologies and by promoting organic and other forms of sustainable agriculture," resulted in the release of biological opinions issued by the agencies in 2003 and 2001, as well supplemental documents. The documents indicate that the FDA was aware of the opinions as it conducted recent hearings over AquaBounty's genetically modified AquAdvantage salmon. Read more of the non-profit's statement concerning the documents, and find links to the documents themselves, here.

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The Washington Post

FDA rules won't require labeling of genetically modified salmon

Advertisement

By Lyndsey Layton
Saturday, September 18, 2010; 11:20 PM

As the Food and Drug Administration considers whether to approve genetically modified salmon, one thing seems certain: Shoppers staring at fillets in the seafood department will find it tough to pick out the conventional fish from the one created with genes from another species.

Despite a growing public demand for more information about how food is produced, that won't happen with the salmon because of idiosyncracies embedded in federal regulations.

The FDA says it cannot require a label on the genetically modified food once it determines that the altered fish is not "materially" different from other salmon - something agency scientists have said is true.

Perhaps more surprising, conventional food makers say the FDA has made it difficult for them to boast that their products do not contain genetically modified ingredients.

The labeling question has emerged as the FDA determines whether to approve the fish, an Atlantic salmon known as AquAdvantage that grows twice as fast as its natural counterpart. The decision carries great weight because, while genetically modified agriculture has been permitted for years and engineered crops are widely used in processed foods, this would be the first modified animal allowed for human consumption in the United States.The AquAdvantage salmon has been given a gene from the ocean pout, an eel-like fish, and a growth hormone from a Chinook salmon.

'The public wants to know'

Consumer advocates say they worry about labeling for genetically engineered beef, pork and other fish, which are lining up behind the salmon for federal approval.

"The public wants to know and the public has a right to know," said Marion Nestle, a professor in the Nutrition, Food Studies and Public Health Department at New York University. "I think the agency has discretion, but it's under enormous political pressure to approve [the salmon] without labeling."

The debate will be taken up this week, with an advisory committee meeting Sunday and Monday on whether to allow the modified fish, and a separate panel meeting Tuesday on whether the fish should be labeled. The panels will offer recommendations to the FDA commissioner, who will decide both matters.

The biotechnology industry is opposed to mandatory labeling, saying it will only bewilder a public that is not well informed about genetic engineering.

"Extra labeling only confuses the consumer," said David Edwards, director of animal biotechnology at the Biotechnology Industry Organization. "It differentiates products that are not different. As we stick more labels on products that don't really tell us anything more, it makes it harder for consumers to make their choices."

The FDA defends its approach, saying it is simply following the law, which prohibits misleading labels on food. And the fact that a food, in this case salmon, is produced through a different process, is not sufficient to require a label.

The controversy comes at a time when Americans seem to want to know more about their food - where it is

grown, how it is produced and what it contains. Books criticizing industrial agriculture have become bestsellers, farmers markets are expanding and organic food is among the fastest-growing segments of the food industry.

The FDA itself is part of a new effort to improve nutrition information on processed foods.

In the European Union and Japan, it is nearly impossible to find genetically modified foods, largely because laws require labeling, said William K. Hallman, director of the Food Policy Institute at Rutgers University. "No one wants to carry products with such a label," he said. "The food companies figure that consumers won't buy it."

There is nothing to stop salmon producers or food makers in the United States from voluntarily labeling their products as genetically engineered - except a fear of rejection in the marketplace, Hallman said. "I don't know of a single company that does that," he said.

The FDA maintains it can only require labeling if a genetically engineered food is somehow different from the conventional version - if it has an unusual texture, taste, nutritional component or allergen, for example.

Although some consumer advocates maintain there are important differences, the agency's scientists have already said they see no "biologically relevant" variations between the AquAdvantage salmon and traditional salmon.

Consumers could be certain of getting the non-modified version if they bought salmon labeled as "wild," but most salmon consumed in this country is farmed.

Ever since the FDA approved the first genetically altered material for use in food in 1992, when Monsanto developed a synthetic hormone injected into cows to increase milk production, the agency has held that it cannot require food producers to label products as genetically engineered.

In the intervening years, the use of genetically engineered crops has skyrocketed; 93 percent of this year's soybean crop is genetically engineered, according to the U.S. Agriculture Department.

Byproducts of those crops - soy lecithin, for example - are found in thousands of processed foods from chocolate bars to breakfast cereal; none is labeled as containing genetically modified ingredients.

No 'Hormone Free' either

The labeling matter is further complicated because the FDA has maintained a tough stance for food makers who don't use genetically engineered ingredients and want to promote their products as an alternative. The agency allows manufacturers to label their products as not genetically engineered as long as those labels are accurate and do not imply that the products are therefore more healthful.

The agency warned the dairy industry in 1994 that it could not use "Hormone Free" labeling on milk from cows that are not given engineered hormones, because all milk contains some hormones.

It has sent a flurry of enforcement letters to food makers, including B&G Foods, which was told it could not use the phrase "GMO-free" on its Polaner All Fruit strawberry spread label because GMO refers to genetically modified organisms and strawberries are produce, not organisms.

It told the maker of Spectrum Canola Oil that it could not use a label that included a red circle with a line through it and the words "GMO," saying the symbol suggested that there was something wrong with genetically engineered food.

"This to me raises questions about whose interest the FDA is protecting," said Rep. Dennis J. Kucinich (D-Ohio), who has introduced legislation that would require labeling for genetically engineered food. "They are clearly protecting industry and not the public."

One state with a sizable salmon fishing industry - Alaska - passed a law in 2005 that requires labeling of any genetically engineered fish sold there.

"One side of the argument says let's give consumers sovereignty over their food choices," Hallman said. "The other says we've done the science on this and it's no different, so if we put a label on it, we're implying it's somehow risky and that's like government imposed false advertising."

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Frankenfish a disaster for Alaska salmon

COMPASS: ***Other points of view***

By DAVE KUBIAK

(02/07/11 19:48:12)

Alaska Sens. Mark Begich and Lisa Murkowski are on the right track opposing the approval of transgenic salmon, or "Frankenfish," on at least two levels: economic and biological.

On the economic level, the approval of Frankenfish will have huge potential impacts on Alaska's wild salmon markets, which are at this point still recovering their profitability from the setbacks of the Exxon Valdez spill, which caused a huge loss of market share to farmed salmon. Yes, it takes that long to recover your market after having it torpedoed by an oil spill or by the confusion over the safety of a product. Confusion over safety and the inconsistent labeling of fish as to origin, species, or provenance leads consumers to buy something else, like chicken.

Alaska's salmon is a huge part of our state's economy, with hundreds of millions of dollars invested in boats, gear, processing plants, and other infrastructure. Guarding against Frankenfish is important to Alaska.

On the biological level, Frankenfish, if approved as the first transgenic agricultural product, will have far-reaching and unknown consequences for nature and for consumers. Mixing the genes of Atlantic salmon with that of an eelpout to promote accelerated growth (10 times faster than normal) is an "Island of Dr. Moreau" experiment that deserves much more scrutiny for the health of our environment and for the well being of consumers.

We have heard of the various doctored chemicals imported in foods and medicines, of the dangers of plasticizers in our bottles and food containers; what we do not need now are unknown and unproven biologicals in our food supply. Approval of Frankenfish will take us into the world of experimentation on new and recombined growth enzymes and genes; we need assurance that these biological compounds will not lead to effects on human health.

We are assured by the developer that these fish, so engineered, are such freaks of nature that they cannot survive in the wild, and yet we are supposed to accept them as wholesome food.

Support Sens. Begich and Murkowski in blocking approval of transgenic Frankenfish for Alaska's economic and public health.

Dave Kubiak is a former Kodiak salmon fisherman and current chairman of the Alaska Marine Conservation Council.

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Bloomberg Businessweek
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AQUACULTURE September 23, 2010, 5:00PM EST

This Genetically Altered Salmon Is No Fish Story

Inching toward FDA approval, AquaBounty's mega-fish stir critics

By Molly Peterson

For 15 years, AquaBounty Technologies has tried to win U.S. approval to sell a genetically modified salmon that can reach full size up to twice as fast as its naturally occurring brethren. Now the effort by the Waltham (Mass.) company may be drawing to a close. U.S. Food and Drug Administration advisers last week held what may be the agency's final hearing on whether AquaBounty's salmon is safe to eat.

The FDA hasn't set the timing of a final decision. Its staff, though, has already agreed that the meat from the altered fish is safe and has no biologically relevant differences from that of the naturally occurring variety. So AquaBounty's fish finally may be headed for American kitchens. FDA approval could make the salmon the first in a series of animals with mix-and-match DNA that have the potential to change the U.S. food chain.

AquaBounty's Atlantic salmon contain a growth gene implanted from another variety of salmon that's activated by DNA from an eel-like creature called the ocean pout. The altered fish can grow to "market weight" of as much as 13 pounds in two or three years, compared with three to four years required for natural salmon, says Chief Executive Officer Ronald L. Stotish.

The company would sell its AquAdvantage brand salmon eggs to fish farms isolated from the ocean that then could see their catch reach supermarkets in about two years. Stotish says the enhanced fish could "increase the availability of a high-quality product that is indistinguishable from the traditional food."

Not everyone is firing up their grills just yet. Groups opposed to genetically modified foods on Sept. 16 held a protest in Washington. "Today it's a fish that we're talking about. But very soon it will be genetically engineered pigs, chicken, and our beloved cows," Ben & Jerry's CEO Jostein Solheim told protesters.

Critics say they're particularly miffed that the FDA is reviewing AquaBounty's altered fish as a veterinary drug rather than creating a new review process for gene-altered foods. FDA spokeswoman Siobhan DeLancey says the genetic material used in the AquaBounty fish meets the statutory definition of a veterinary drug because it alters the structure and function of the animal. She says veterinary drug approval is stringent: "The review of the AquAdvantage salmon, conducted under that process, includes a rigorous analysis of food safety and application of a stringent safety standard: 'reasonable certainty of no harm.'"

The FDA's decision, critics say, allows some testing data reviewed by regulators to be kept confidential, as trade secrets. "They're obviously using this veterinary designation to keep the data confidential," says Wenonah Hauter, executive director of Food & Water Watch, an environmental and food-safety group in Washington. "I think they're afraid of the public reaction."

Alaska Senators Mark Begich and Lisa Murkowski, whose state harvested 163 million commercial salmon last year, are also against AquAdvantage. "Let's call this genetically engineered fish for what it is: Frankenfish,"

Begich said in a statement. "Approval of genetically modified salmon, the first such hybrid to be considered for human consumption, is unprecedented, risky, and a threat to the survival of wild species."

The modified fish, all female, are sterile, so they can't reproduce with regular salmon, Stotish says. "People who take the time to look" at the regulatory data "will satisfy themselves that the FDA has taken a very cautious, very robust regulatory approach," he says.

Stotish says 97 percent of the total tonnage of salmon now consumed in the U.S. is imported. Almost 427,000 tons, valued at $1.39 billion, was imported last year from countries led by Chile, Canada, and Norway, according to Agriculture Dept. data. Although he says it's too early to project the sales potential of AquAdvantage eggs, Stotish says the fast-growing salmon could help domestic fisheries gain a larger share of the market.

The genetically engineered salmon eggs are produced at an AquaBounty facility in Prince Edward Island, Canada, and the fish are grown to market weight at an AquaBounty farm in Panama. If the FDA approves the aquaculture company's salmon, another company would sell the Panama-grown fish in the U.S., Stotish told reporters at a Sept. 20 FDA advisory panel meeting. He declined to identify the company because the product hasn't been approved yet. "AquaBounty does not plan to be in the fish business," he said. "We're a technology company."

The bottom line: *Although genetically modified crops have been used for 20 years, AquaBounty's gene-altered salmon is facing fierce scrutiny and protests.*

Peterson is a reporter for Bloomberg News.

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Labeling Genetically Engineered Food: The Consumer's Right to Know?

Carolyn Raab and Deana Grobe
Oregon State University

A statewide survey assessed Oregon voters' reasons for supporting or opposing a November 2002 ballot measure requiring labeling of genetically engineered (GE) foods. Of the 499 who voted on the measure, 34% supported labeling and 55% opposed it. Women, urban dwellers, and households with environmental organization membership tended to favor labeling. Reasons behind voting decisions varied widely. Consumers' right to know was a major reason for support. Cost was a major concern of the opposition. A higher percentage of those who favored labeling was "not at all likely" or "not too likely" to purchase GE-labeled food.

Key words: consumer attitudes, food, genetically engineered, genetically modified, labeling, likelihood to buy, Oregon ballot measure, organic.

Do consumers have the right to know whether the food they are buying has been genetically modified? Traditional crossbreeding has created genetically modified crops for many years. Genetic engineering now makes it possible to modify individual genes more precisely in order to grow crops with desired characteristics (Institute of Food Technologists, 2000). These genetically engineered (GE) foods began to appear in the marketplace in the mid-1990s—unbeknownst to most consumers.

Proponents of genetic modification in agriculture claim that it is a safe, valuable tool for efficiently producing more food (Jaeger, 2002). Critics claim that the safety of genetically modified foods for human health and the environment is unproven. These issues have led to questions about consumers' right to know what is in their food and how best to make this information available to them.

Labeling of biotech foods in the United States has been controversial (Korwek, 2000). Such labeling is required in the European Union and several other countries (Carter & Gruère, 2003; Jaeger, 2002; McCullum, 2000). The US Food and Drug Administration (FDA) does not require such labeling unless genetically modified products differ significantly from their traditional counterparts. Proposed FDA guidelines for voluntary labeling have not yet been finalized (Tegene, Huffman, Rousu, & Shogren, 2003). Some have suggested that voluntary labeling could increase industry credibility and consumer acceptance (Brown & Ping, 2003).

GE Labeling Issues in Oregon

Surveys have shown that consumers want genetically engineered food to be labeled (Brown & Ping, 2003; Hoban & Kendall, 1993; Nestle, 1998). Consumers' desires to make informed decisions about food purchases have made the biotechnology food labeling issue an important public policy concern. Labeling genetically modified food presents major challenges for policymakers, however (Carter & Gruère, 2003). The state of Oregon has been in the forefront of this debate.

In November 2002, Oregonians voted on a ballot measure that would have required labeling of genetically engineered foods sold or distributed in or from Oregon (State of Oregon, 2002). Ballot Measure 27 required labels on all foods containing at least 0.1% of genetically modified ingredients. Any foods grown or distributed in Oregon for human or animal consumption were affected. The measure defined *genetically engineered* as "grown, manufactured, processed or otherwise produced or altered with techniques that change the molecular or cell biology of an organism by means or in a manner not possible under natural conditions or processes, including but not limited to recombinant DNA techniques, cell fusion, micro-and macro-encapsulation, gene deletion and doubling, introducing a foreign gene, and changing the positions of genes." Furthermore, the measure's definition of genetic engineering excluded "breeding, conjugation, fermentation, hybridization, in-vitro fertilization and tissue culture processes" (State of Oregon, 2002).

Proponents of the ballot measure (Citizens for Safe Food) argued for the consumers' right to know. They questioned whether safety to human health and the environment had been proven. Opponents (Coalition against Costly Labeling Law) raised concerns about potential costs (including the impact on farmers), as reflected in the media campaign.

FROM THE OFFICES OF...

SENATOR LISA MURKOWSKI & SENATOR MARK BEGICH

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FOR IMMEDIATE RELEASE
January 31, 2011

Senators Introduce Legislation Banning "Frankenfish"

Effort to stop genetically-engineered salmon protects Alaska fish

U.S. Senators Mark Begich (D-Alaska) and Lisa Murkowski (R-Alaska) today formally introduced legislation to ban genetically-engineered (GE) salmon. The legislation, and a companion bill that would require labeling of GE fish, are in response to a proposal by AquaBounty Technologies currently under consideration by the Food and Drug Administration (FDA).

"Frankenfish threatens our wild stocks, their habitat, our food safety, and would bring economic harm to Alaska's wild salmon fishermen," Begich said. "Genetically-modified salmon, the first such hybrid to be considered for human consumption, is risky, unprecedented and unnecessary."

"I am strongly opposed to the FDA approval of genetically engineered salmon. It is completely irresponsible for the FDA to even consider this action without evaluating the impacts on Alaska's wild salmon fisheries," **Murkowski** said. "The FDA has not studied the environmental effects, let alone the economic impacts on the salmon and seafood markets that would result from approval."

Today's bill introduction is actually a reintroduction of legislation Sen. Begich sponsored and Sen. Murkowski co-sponsored in the last Congressional session. The FDA has not indicated when it will make a decision on the AquaBounty proposal, and the senators are hoping to move the legislation quickly.

In September, Begich and Murkowski were among a group of ten senators who sent a letter to the FDA questioning the review process and the safety of a genetically-engineered animal for human consumption. The FDA is considering AquaBounty's proposal to produce a hybrid

Atlantic salmon modified with a Chinook salmon growth gene and an antifreeze gene from an eel-like fish, the ocean pout.

In addition to Begich and Murkowski, the bill to ban GE fish is co-sponsored by Sen. Patty Murray (D-Washington) and the bill requiring labeling, should GE fish get approved, is co-sponsored by Sen. Murray and Sen. Ron Wyden (D-Oregon).

###

FDA holds public hearing on the labeling of food made from AquAdvantage Salmon

Source: The Acta Group, L.L.C. and The Acta Group EU, Ltd

On September 21, 2010, the U.S. Food and Drug Administration (FDA) held a public hearing on the issue of labeling food made from the genetically engineered (GE) fish AquAdvantage Salmon, an Atlantic salmon produced by AquaBounty Technologies, Inc. The purpose of this hearing was to present the relevant legal principles for food naming and labeling, and describe information made available prior to the hearing about characteristics of AquAdvantage Salmon (e.g., the chemical composition and standardized methods used to identify species in the market place) that may be relevant to food naming and labeling. The FDA sought comment on the application of the relevant food labeling principles to products that are made from AquAdvantage Salmon. The FDA's August 2010 background document is available online.

According to the FDA, the following five key principles for labeling foods are applicable to the issue of labeling foods made from GE animals, such as AquAdvantage Salmon:

- Food labeling that is false is prohibited;
- Food labeling that is misleading is prohibited, particularly in light of material facts about the product;
- Voluntary labeling about production methods is allowed, as long as the labeling is not false or misleading;
- The label must include a name that accurately describes the basic nature of the food; and
- FDA cannot require additional labeling about production methods, unless it is necessary to ensure that the labeling is not false or misleading.

The FDA sought input on two issues:

- Which facts about the AquAdvantage Salmon seem most pertinent for FDA's consideration of whether there are any 'material' differences between foods from the GE salmon and foods from other Atlantic salmon? The FDA asked stakeholders to keep in mind that the use of genetic engineering does not, in and of itself, constitute a 'material' difference under the law.
- If the FDA determined there are 'material' differences, how would the differences be described on a food label in a way that is truthful and non-misleading? FDA noted that it is the difference in composition, or in functional, organoleptic, or other material properties that must be described, not the underlying methods of production.

Speakers presented many comments to and asked questions of the FDA panelists, expressing their views for and against labeling the GE AquAdvantage Salmon. Some of the views shared included:

- The safety of GE foods;
- The difference in taste of GE foods versus non-GE foods;
- Endogenous allergens in fish;
- Country of origin labeling;
- Lack of adequate means to assess the origin of food;
- Uses in modern agriculture to increase productivity;
- Absence labeling;
- Relationship of material fact to nutritional value;
- Food ingredient analysis;
- Labeling as a risk management tool;
- Proper safety assessments;
- Food ingredient concerns;
- Environmental impact associated with production;
- Use of sound science as basis for regulation;
- Cost to consumers for a mandatory label;
- Examples of previously released GE foods; and
- Emphasis on food surveys to determine consumer opinion on labeling.

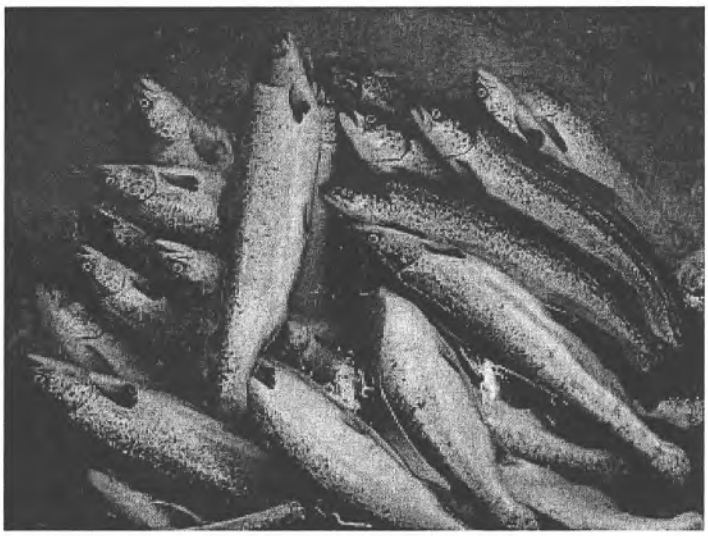
The FDA noted that the Veterinary Medicine Advisory Committee (VMAC) planned a separate public meeting to consider issues regarding the safety and effectiveness of the new drugs that are the subject of the new animal drug application (NADA) concerning AquAdvantage Salmon. If the FDA approves the NADA, public comments from the September 21 hearing on labeling of food from AquAdvantage Salmon will assist the FDA in the application of its food labeling principles. These principles will determine if the FDA should require labeling for such food, beyond that required for food from other varieties of Atlantic salmon.

Canadian 'Frankenfish' Named One of 2010 Top Inventions

FDA could soon approve genetically modified salmon, lawsuit threatened

By Joan Delaney
Epoch Times Staff

Last Updated: Dec 30, 2010 *Created:* Dec 30, 2010



Salmon wait to be processed at a fish factory in Chile. A controversial fast-growing genetically engineered salmon developed in Canada could soon be approved for sale in the U.S. (Francisco Negroni/AFP/Getty Images)

A controversial fast-growing genetically engineered salmon developed in Canada has been named one of the 50 best inventions of 2010 in the online version of Time Magazine.

U.S. biotech company AquaBounty Technologies Inc.'s GE salmon—dubbed "Frankenfish" by environmentalists—could soon be approved for sale in the U.S.

AquaBounty plans to produce the GE salmon eggs at its facility on Prince Edward Island, then ship them to Panama to be grown and processed in controlled facilities.

The company is currently seeking approval from the Food and Drug Administration (FDA) to sell the salmon in the U.S. If it gets the green light, the salmon, called AquAdvantage, will be the first GE animal ever approved for human consumption.

AquaBounty engineered Atlantic salmon to grow faster by inserting a growth hormone from Chinook salmon and genetic material from the eel-like ocean pout, which can survive in extremely cold waters. The technology was developed by scientists at Newfoundland's Memorial University.

"The problem is that salmon make bad farm animals; it takes 3 lb. (1.36 kilos) of feed to grow 1

lb. (.45 kilo) of salmon," Time said. "AquAdvantage Atlantic salmon can grow twice as fast, making them easier to farm."

But opposition to the transgenic salmon—from environmental and consumer groups, food safety advocates, and commercial and recreational fisheries associations, among others—has been growing on both sides of the border.

Just last week, the U.S. chapter of Trout Unlimited said it is prepared to take legal action if the FDA approves AquAdvantage for sale.

Trout Unlimited CEO Chris Wood says the FDA is not equipped to estimate the environmental risk posed by GE animals and doesn't have any fisheries scientists—"and that's who we need looking at this now."

Related Articles

- Has the FDA Already Decided About Genetically Engineered Salmon? Part 2
- 'Frankenfish,' Genetically Modified Salmon, Face Review by FDA Panel

"We are not a litigious organization, but we are just so profoundly concerned that while the FDA may have done a great job in terms of looking at the potential impacts on human health of genetically modified salmon, the FDA is patently unqualified to be able to look at the potential environmental effects of allowing these fish to be brought to market."

'Enviropig' Next?

The FDA declared in September that the genetically altered salmon are safe to eat and "are not expected to have a significant impact" on the environment.

AquaBounty has said there will be tight regulations around marketing the salmon. But that's not enough, says Wood.

"Once these get on the market and other countries get a hold of them and other companies get a hold of them, there's no guarantees and there's no assurances or safeguards that they won't be released into the environment, either inadvertently or intentionally.

"We want to see the affects of that almost inevitability very carefully studied and researched before the government makes a decision."

Biotech opponents in Canada fear that if AquaBounty's salmon is approved for the U.S. market, Canadians will be the next to find unlabelled GE salmon on their store shelves—followed by the GE "Enviropig" engineered by scientists at the University of Guelph. The university has asked Health Canada to approve Enviropig for human consumption.

A coalition representing fisheries and oceans conservation, environmental, and social justice groups—60 organizations in all—is working to block the GE salmon completely in Canada.

The coalition has released a statement of

'The consequences of an accident are so huge that the risks are just

"categorical objection" to the raising of GE fish and fish eggs and has called on Environment Minister John Baird to take action to prevent the eggs from being produced in Canada.

too big to consider releasing this GE salmon.'—Lucy Sharratt

Lucy Sharratt of the Canadian Biotechnology Action Network calls the technology dangerous and says the GE salmon pose a "profound threat" to wild fish if they escape.

"There's always going to be a risk, and the consequences of an accident are so huge that the risks are just too big to consider releasing this GE salmon. Consumers don't want it. Even the aquaculture industry doesn't want it. So it's not wanted and yet it represents a huge risk to an endangered wild fish population."

Minimal Risk of Escape

AquaBounty, which does not yet have permission from Environment Canada to commercially produce its salmon eggs in P.E.I., says the likelihood of escape is minimal due to stringent containment measures at its land-based facilities in both P.E.I. and Panama.

If an accidental escape did occur, "environmental conditions at the facilities are such that survival of the organisms would be highly unlikely," the company said in its Environmental Risk Assessment.

"We believe the economic and environmental benefits of our salmon will very effectively help to meet the demand for food from the growing world population," said Ronald Stotish, president and CEO of AquaBounty, in an August press release.

Ruth Salmon, spokeswoman for the Canadian Aquaculture Industry Alliance, says the aquaculture industry doesn't support producing genetically engineered salmon for human consumption.

"We have done quite a bit of research and the market doesn't want [GE salmon], our customers don't want it," Salmon told the Vancouver Sun.

"The aquaculture industry knows that if genetically engineered salmon are approved, consumers will start rejecting farmed salmon as a means of avoiding genetically engineered salmon," says Sharratt.

"There's going to be a huge consumer backlash and it's the aquaculture industry that's going to feel that when consumers stop buying farmed salmon."

Related Articles

- Has the FDA Already Decided About Genetically Engineered Salmon? Part 2
- 'Frankenfish,' Genetically Modified Salmon, Face Review by FDA Panel

A U.S. survey conducted in September found that, overall, 78 percent of adults believe the FDA

should not approve GE salmon for human consumption, compared to 16 percent who want to see it approved.

A group of 12 U.S. organizations, including the Union of Concerned Scientists, Greenpeace, and the Ocean Conservancy, has sent a letter to President Barack Obama and the FDA demanding that the agency conduct a rigorous environmental impact study before deciding whether to approve the GE salmon.

COMMITTEE ON ARMED SERVICES

COMMITTEE ON
COMMERCE, SCIENCE, AND TRANSPORTATION

MARK BEGICH
ALASKA

COMMITTEE ON VETERANS' AFFAIRS

COMMITTEE ON THE BUDGET

United States Senate

WASHINGTON, DC 20510

November 17, 2010

The Editor
Time
Time & Life Building, Rockefeller Center
New York, NY 10020-1393

Via email to: letters@time.com

To the Editor:

Time's editors must have been watching too many mad scientist movies if they consider genetically-engineered salmon among the 50 best inventions of the year (Nov. 22, page 73).

Despite the supposed advantage of growing twice as fast as wild salmon, serious concerns remain about the environmental and human health impacts of these gene-spliced fish. There are glaring deficiencies in the Food and Drug Administration's closed-door review process and public opposition to eating these creatures is so strong proponents are fearful of labeling their product what it is: genetically-engineered.

Want more salmon? Here's a better idea: protect its natural habitat, maintain water quality and manage wild stocks for sustainability. That's what Alaska has done for over 50 years and now returns of wild salmon are at historically high levels. And wild salmon taste a lot better than anything you'll ever cook up in a laboratory.

Let's leave "Frankenfish" on the operating table and not the dinner table.

Sincerely,

Mark Begich
United States Senator

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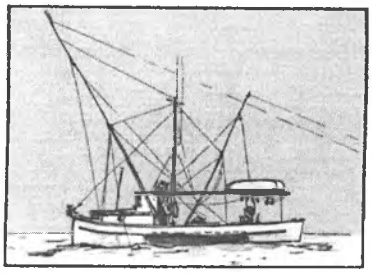
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February 3, 2011

Representative Steve Thompson, Chairman
House Fisheries Committee
Alaska State Legislature
Juneau, AK 99811

RE: HJR 8 Opposing Genetically Engineered Salmon

Dear Representative Thompson and Committee Members:

The Alaska Trollers Association (ATA) strongly supports HJR 8, which encourages Congress to ban the sale of genetically engineered (GE) salmon in the United States; comply with consultation requirements, as defined in the Food and Drug Administration Amendments Act of 2007 (FDA); and, requires labeling should the nation allow the sale of GE salmon.

ATA represents hook and line commercial salmon fishermen. Our members take quite seriously the job of delivering a wholesome, high quality product to market and are firmly committed to sound science underpinning the decisions made regarding the food people eat. ATA is also concerned about the health of fishing communities, most of which have already suffered the negative impacts of seafood markets glutted with farmed fish.

ATA strongly opposes the genetic engineering of seafood and has called on FDA to deny approval of these engineered animals. To date, FDA has failed to conduct the appropriate studies to prove the claim that this product, and how it will be raised, will ultimately be safe for human health and the environment. Despite that fact, FDA has signaled that the product may be approved. Therefore we are also compelled to say that our members strongly support mandatory labeling to distinguish GE salmon if it ever should reach the marketplace. We are proud that Alaska has already taken action to support labeling for such products and we support strengthening and enforcing the existing law.

Fishermen are particularly alarmed by the cavalier approach the nation has taken on the issue of genetically engineered foodstuffs. FDA is treating the approval of genetically engineered salmon as if it were a drug. This has shrouded the process in secrecy, in part to protect the patent rights of the developers. The failure of our country to vision a transparent approval process and strict regulatory program for genetically engineered animals/foods is shameful and potentially harmful.

It is already well documented that when it comes to safe food production and GE, the jury is out amongst the scientific community. FDA's own veterinary advisory committee suggested that the science presented was incomplete, particularly if these fish will be raised outside of the two test farms studied and under full scale production scenarios. We can be certain this is the goal.

While FDA and industry backgrounders try to calm the public by explaining that these fish will be just like any other Atlantic salmon, that's simply not true. Once you allow an organism to be modified, it becomes different and the level of risk changes, period. FDA's own scientists pointed that out during the 1990s debate on FDA's policy on GE plants. GE salmon could pose enhanced allergy risks to consumers. This issue lacks robust study and is not well-understood by the consuming public.

Those of us in the seafood industry know far too well that there exists a great deal of confusion when it comes to the seafood market. Engineered salmon certainly aren't like any other salmon, yet the public could easily become confused about which fish are modified and which are not, and opt out of salmon altogether if they fear they are not safe. Our industry could bear a direct cost if this happens.

It appears that FDA and the nation are more than willing to place the burden of proving or disproving food safety on either a multi-national industry that stands to gain financially from GE salmon; or the smaller seafood industry that stands to lose by being overwhelmed by increased farmed production or consumer fears about salmon; or, perhaps even the public themselves if problems arise.

While FDA might not currently believe that GE salmon is markedly different, we have to wonder what other countries think, and why, since so many of them have strongly disagreed with the US on this and other policy questions swirling around GE foods. While current trade agreements and the tendency to lean towards agency discretion may be forcing the hand of the courts and nations, there is obviously no consensus amongst scientists on the matter of GE food and policy. In the court of public appeal, we suggest most people do believe GE salmon is different, and most aren't certain it's safe, therefore, if approved, it should be labeled.

Labeling of GE foods boils down to one of the most fundamental of human needs and rights –access to wholesome foods and information about how they are produced. While the GE salmon may ultimately prove safe, there is no doubt that it is unlike any other salmon available today. It is a processed food at its most basic level, and should be labeled accordingly, particularly when no independent science exists to prove that it is safe. Such a label is not misleading, nor is it in any way false, it is simply telling the consumer the truth about a type of food that until just a few years ago was inconceivable. People should have the right to choose.

Furthermore, there are many reasons beyond food safety that people may choose to avoid GE foods. Social, cultural, religious, and other factors all have a role in food selection. Respect for those choices can also be accomplished through labeling.

While the use of genetic engineering may be appropriate and beneficial for a variety of purposes, such as medical advancement, it does not appear that the science exists to underpin decisions with regard to what, if any, genetically engineered foods belong in the food chain and environment. We hope you will agree, and vote to support HJR8.

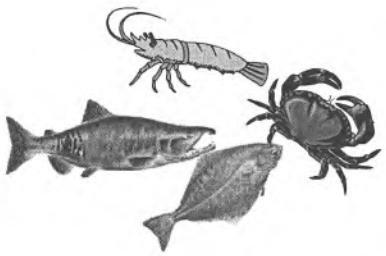
Thank you for considering ATA's point of view. Please let me know if I can answer questions on ATA's position or otherwise be of assistance as you work through this matter.

Best regards,

Dale Kelley

Dale Kelley
Executive Director

Southeast Alaska Fishermen's Alliance
9369 North Douglas Highway
Juneau, AK 99801
Phone: 907-586-6652 Email: seafa@gci.net
Fax: 907-523-1168 Website: http://www.seafa.org



February 10, 2011

Representative Steve Thompson, Chairman
House Special Committee on Fisheries
Alaska State Legislature
State Capitol, 120 Fourth Street
Juneau, AK 99801-1182

Dear Chairman Thompson and Committee Members,

RE: Support HJR 8

Southeast Alaska Fishermen's Alliance (SEAFA) supports HJR 8, a resolution urging FDA to deny an application to sell genetically engineered salmon in the US and requiring product labeling if the product is approved.

SEAFA has been in opposition to genetically engineered fish since the beginning of the permit process in approximately 2000. As you know the process to consider the application has been flawed as the FDA only looked at the aspect if the fish were safe for human consumption but failed to consult adequately with NMFS. Genetically engineered fish must be considered in light of the effect to the environment as well much as you would evaluate the effect of an invasive species.

Salmon is an important resource in the State of Alaska for commercial, personal use, subsistence, and sport fishermen and approval of genetically modified salmon into the environment and market place can be damaging. SEAFA members fully support the House Joint Resolution 8 and urges a speedy approval by the Alaska State Legislature.

Sincerely,

Kathy Hansen
Executive Director

Chris Wood
Chief Executive Officer

January 6, 2011

Representative Scott Kawasaki
Alaska State Capitol
Juneau, AK 99801

Dear Representative Kawasaki:

On behalf of Trout Unlimited's 140,000 members nationwide, I would like to thank you for formally opposing AquaBounty's proposal to produce and distribute genetically modified salmon in the U.S. We commend you on your leadership and for ensuring that Alaska's wild fish and fisheries are protected from potentially irreversible threats.

As you know, AquaBounty Technology's proposal to the U.S. Food and Drug Administration is concerning for multiple reasons. Trout Unlimited is particularly concerned about the Food and Drug Administration not properly investigating the potential environmental consequences to wild stocks when genetically modified fish escape into the wild. That is why we support your move to ban the production of genetically engineered fish in Alaska's waters as a way to ensure that Alaska's salmon fisheries are not compromised by this experimental technology. It is encouraging to see Alaska's lawmakers continue to make wild fish a priority and to protect this sustainable and renewable resource from harmful industries and actions.

Trout Unlimited has been working for several years with salmon retailers, restaurants and commercial fishermen to promote the sustainable harvest of wild salmon from places such as Alaska's Bristol Bay (see www.whywild.org). Our focus is on maintaining productive habitat that supports abundant salmon runs, sustainable fisheries, and healthy communities. Our work has helped build public awareness so that salmon consumers around the country can make informed choices that support our nation's sustainable salmon fisheries. Having genetically engineered salmon on grocery store shelves and restaurant menus without proper labeling would create confusion among salmon consumers, making it more difficult for them to make an educated decision. Lack of labeling could also discourage consumers who are opposed to genetically modified fish from buying salmon at all, thus impacting Alaska's salmon fishing industry and communities. Your proposed bill to require labeling of any genetically modified and farmed fish sold in Alaska will enable Alaskan consumers to continue making informed decisions when they purchase salmon and the ability to vote with their dollars for wild Alaska salmon.

Alaska has long been the leader when it comes to sustainable fishery management, and so we are pleased to see Alaska continue to protect the ecological and economic health of its wild fisheries. We thank you again for your work on this important issue and we look forward to working with you, the Alaska Legislature, and the Alaska Congressional Delegation to ensure that Alaska's wild salmon and sustainable fisheries are not compromised by the commercial production of genetically engineered fish. Please feel free to contact me or Elizabeth Dubovsky in our Juneau office if you have any questions about our work (edubovsky@tu.org / 907.586.2588).

Sincerely,

Chris Wood

Cc: Senator Mark Begich
Senator Lisa Murkowski
Congressman Don Young

HJR 10

<TARGET><BILL>HJR 10</BILL><SUBJECT>HJR 10</SUBJECT><COMM>HFSH27</COMM></TARGET>

Representative Beth Kerttula

House Minority Leader

Sponsor Statement

Joint House Resolution HJR10 "Ocean Acidification Research"

"Supporting expanded research concerning the detrimental effects of ocean acidification."

House Joint Resolution 10 recognizes the threat ocean acidification poses to Alaska's marine ecosystems, tourism industry and fisheries. The resolution supports research of ocean acidification to understand the effect ocean acidification would have on Alaska's economy.

Alaska may be particularly vulnerable to ocean acidification because of its unique climate. Ocean salinity can act as a buffer against carbon dioxide absorption; however, Alaska's cold ocean temperature creates a lower salinity content, and allows more carbon dioxide to be absorbed into the water. When carbon dioxide is absorbed by the ocean, it has the potential to harm marine ecosystems. Marine organisms, such as plankton and shellfish, and other foods that form the marine food base are at risk of being affected by ocean acidification. Alaskan marine ecosystems may be more susceptible to the effects of carbon dioxide absorption and more research needs to be done to establish how ocean acidification may affect various sector of Alaska.

Alaskan oceans serve Alaska in many ways. In 2007 Alaska accounted for more than 62 percent, by volume, of the commercial seafood harvested in the United States. The jobs that are created by the seafood industry out-number the number of jobs created by any other industry in the state. Many tourists come to Alaska to see Alaska's marine wildlife. Tourism is Alaska's third largest private sector and supplies 26,000 full time jobs. The oceans are also a critical food source for many Alaskans. This resolution would promote research that supports protecting all these activities and industries.

Because of Alaska's unique situation, ocean acidification could be more severe in Alaska and could pose a larger threat to Alaska's marine ecosystems, fisheries and tourism industry which all play a large role in Alaska's economy, and Alaskan's way of life.

Thank you for your support of House Joint Resolution 10

Alaska State Legislature ✧ District 3 ✧ Juneau
State Capitol ✧ Juneau, Alaska 99801-1182 ✧ (907) 465-4766 ✧ Fax (907) 465-4748
Rep.Beth.Kerttula@legis.state.ak.us ✧ www.kerttula.net

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2/21/12

CS FOR HOUSE JOINT RESOLUTION NO. 10(FSH)

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-SEVENTH LEGISLATURE - SECOND SESSION

BY THE HOUSE SPECIAL COMMITTEE ON FISHERIES

Offered:
Referred:

Sponsor(s): REPRESENTATIVES KERTTULA, Miller

A RESOLUTION

Supporting expanded research concerning the detrimental effects of ocean acidification.

BE IT RESOLVED BY THE LEGISLATURE OF THE STATE OF ALASKA:

WHEREAS ocean waters and resources are vital to the economy, cultural identity, and daily lives of many Alaskans; and

WHEREAS it is estimated that the seafood industry contributed a total of $5,800,000,000 to the state's economic output in 2007, including an estimated $3,600,000,000 in wholesale value and $2,200,000,000 in indirect and induced economic output; and

WHEREAS Alaska is home to eight of the 20 largest seafood ports in the United States; and

WHEREAS, in 2007, Alaska seafood accounted for more than 62 percent, by volume, of the commercial seafood harvested in the United States; and

WHEREAS the seafood industry employs more workers than any other industry in the state; and

WHEREAS tourism is a major economic engine in the state, with a direct economic contribution that exceeds $1,600,000,000 annually and an induced effect that exceeds $2,000,000,000 annually; and

WHEREAS tourism is the state's third largest private sector employer, supplying more than 26,000 full time equivalent jobs; and

WHEREAS recreational fishing, whale watching, and other ocean-related activities constitute critical sectors of the state's tourism industry; and

WHEREAS coastal residents of the state depend on ocean resources for subsistence, recreation, and other uses; and

WHEREAS tourism, fishing, subsistence, and recreation are supported by healthy ocean ecosystems; and

WHEREAS the world's oceans have absorbed more than a quarter of the carbon dioxide released into the atmosphere since the start of the Industrial Revolution; and

WHEREAS carbon dioxide absorbed by the oceans has altered ocean chemistry, increasing the acidity of the ocean by 30 percent on average since the start of the Industrial Revolution; and

WHEREAS the acidity of surface water could double by the end of this century if current trends continue; and

WHEREAS the process of ocean acidification is accelerated in Arctic waters because carbon dioxide is more soluble in cold water, and lower salinity diminishes the capacity of oceans to buffer against acidification; there is evidence that ocean acidification is both more severe and occurring more rapidly in the state's ocean waters than in tropical waters; and

WHEREAS the effects of ocean acidification could create conditions detrimental to marine ecosystems in the state within decades; and

WHEREAS ocean acidification will affect the growth, reproduction, behavior, disease resistance, and other biological and physiological processes of many marine organisms; and

WHEREAS ocean acidification threatens carbonate-forming species, such as coral, shellfish, and many species of marine plankton, and changes to those species may cause significant detrimental effects throughout marine ecosystems and food webs, affecting the largest marine organisms and many commercial fisheries; and

WHEREAS plankton, which form the base of the marine food web, King, Tanner, and Dungeness crab, deep-sea coral gardens, and pteropods, which serve as important prey for whales, salmon, and other marine life, are all at risk because of the effects of ocean

acidification; and

WHEREAS the North Pacific Fishery Management Council, in its 2007 Aleutian Islands Fishery Ecosystem Plan, highlighted ocean acidification as both very likely to occur and likely to cause significant ecological and economic effects; and

WHEREAS, because there is a scarcity of relevant data necessary for assessing the potential effects of ocean acidification in the state, the North Pacific Fishery Management Council has recommended ocean acidification be a research priority;

BE IT RESOLVED that the Alaska State Legislature recognizes that ocean acidification is a threat to the state's marine ecosystems, tourism industry, and fisheries; and be it

FURTHER RESOLVED that the Alaska State Legislature supports the monitoring and research that are necessary to study the effects of ocean acidification on the state's marine ecosystem to determine potential effects on the state's economy and to assess opportunities to address the effects of ocean acidification.

COPIES of this resolution shall be sent to the Honorable Barack Obama, President of the United States; the Honorable Joseph R. Biden, Jr., Vice-President of the United States and President of the U.S. Senate; the Honorable Hillary Rodham Clinton, United States Secretary of State; the Honorable John Boehner, Speaker of the U.S. House of Representatives; the Honorable Harry Reid, Majority Leader of the U.S. Senate; the Honorable Lisa P. Jackson, Administrator of the U.S. Environmental Protection Agency; Dr. Jane Lubchenco, Under Secretary of Commerce for Oceans and Atmosphere and National Oceanic and Atmospheric Administration Administrator; Samuel D. Rauch III, Acting Assistant Administrator for Fisheries, National Oceanic and Atmospheric Administration; Julia L. Gourley, U.S. Senior Arctic Official, Office of Ocean and Polar Affairs, U.S. Department of State; the Honorable Patrick K. Gamble, President, University of Alaska; and the Honorable Lisa Murkowski and the Honorable Mark Begich, U.S. Senators, and the Honorable Don Young, U.S. Representative, members of the Alaska delegation in Congress.

FISCAL NOTE

STATE OF ALASKA
2012 LEGISLATIVE SESSION

Bill Version: **HJR10**
Fiscal Note Number:
() Publish Date:

Identifier (file name): HJR10-LEG-COU-2-22-12
Dept. Affected: Legislature
Title: "Supporting expanded research concerning the detrimental effects of ocean acidification."
Appropriation: Legislative Council
Allocation: Session Expenses
Sponsor: Representatives Kerttula and Miller
Requester: House Special Committee on Fisheries
OMB Component Number: 782

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	FY13 Appropriation Requested	Included in Governor's FY13 Request	Out-Year Cost Estimates				
OPERATING EXPENDITURES	**FY13**	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**
Personal Services							
Travel							
Services							
Commodities							
Capital Outlay							
Grants, Benefits							
Miscellaneous							
TOTAL OPERATING	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

FUND SOURCE		(Thousands of Dollars)						
1002	Federal Receipts							
1003	GF Match							
1004	GF							
1005	GF/Prgm (DGF)							
1037	GF/MH (UGF)							
1178	temp code (UGF)							
TOTAL		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

POSITIONS							
Full-time							
Part-time							
Temporary							

CHANGE IN REVENUES							

Estimated SUPPLEMENTAL (FY12) operating costs _____ *(separate supplemental appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Estimated CAPITAL (FY13) costs _____ *(separate capital appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Why this fiscal note differs from previous version (if initial version, please note as such)

Initial Version

Prepared by: Jessica Geary, Finance Manager — Phone: 465-6626
Division: Legislative Affairs Agency — Date/Time: 2/22/12 4:30pm
Approved by: Pamela Varni, Executive Director — Date: 2/22/2012
Legislative Affairs Agency

(Revised 1/17/2012 OMB)

FISCAL NOTE

STATE OF ALASKA
2012 LEGISLATIVE SESSION

BILL NO. HJR10

Analysis

This Legislation has zero fiscal impact on the Legislative Affairs Agency.

ORAL TESTIMONY OF
RICHARD A. FEELY, Ph.D.
OFFICE OF OCEANIC AND ATMOSPHERIC RESEARCH
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
U.S DEPARTMENT OF COMMERCE

HEARING ON

BEFORE THE
STATE OF ALASKA HOUSE FISHERIES COMMITTEE
ALASKA HOUSE OF REPRESENTATIVES

February 23, 2012

Good afternoon Chairman Thompson and members of the House Fisheries Committee. My name is Dr. Richard Feely. I am a NOAA Senior Fellow and head of the Carbon Program at the Pacific Marine Environmental Laboratory in Seattle, Washington. My expertise is in ocean carbon measurements and ocean acidification. Thank you for giving Dr. Mathis and myself the opportunity to speak with you today on ocean acidification, its impacts on marine life, and potential economic impacts.

Fundamental measurable changes in seawater chemistry are occurring throughout the world's oceans. Over the past two and a half centuries, the release of 2 trillion tons carbon dioxide from our industrial and agricultural activities has resulted in atmospheric carbon dioxide levels that have increased from about 280 to 392 parts per million. To date, the oceans have absorbed about one third of the carbon emissions released by human activities during this period. This natural process of absorption has benefited humankind by significantly reducing the greenhouse gas levels in the atmosphere and reducing some of the impacts of global warming. However, decades of ocean observation and research sponsored by NOAA, the National Science Foundation and the Department of Energy show that the ocean's daily uptake of 22 million tons of carbon dioxide is having a significant impact on the chemistry and biology of the oceans.

When carbon dioxide reacts with seawater, chemical changes occur that cause a decrease

in seawater pH and carbonate ions. These chemical changes are commonly referred to as "ocean acidification." Scientists have estimated that surface ocean pH has fallen by about 0.1 units since the beginning of the industrial revolution. Since the pH scale, like the Richter scale, is logarithmic, this change represents approximately a 30 percent increase in ocean acidity. Future predictions indicate that the oceans will continue to absorb carbon dioxide and become even more acidic. Estimates of future carbon dioxide levels, based on business as usual emission scenarios, indicate that by the end of this century the surface waters of the ocean could be nearly 150 percent more acidic, resulting in a pH that the oceans haven't experienced for more than 20 million years.

Many marine organisms that produce calcium carbonate shells or skeletons, such as crabs, oysters, scallops, and pteropods, are negatively impacted by the increasing carbon dioxide levels and decreasing pH in seawater. For example, increasing ocean acidification has been shown to significantly reduce the ability of reef-building corals to produce their skeletons. Coral biologists have reported that ocean acidification could compromise the successful fertilization, larval settlement and survivorship of Elkhorn coral, an endangered species. These research results suggest that ocean acidification could severely impact the ability of coral reefs to recover from disturbance. Other research indicates that, by the end of this century, coral reefs may erode faster than they can be rebuilt. This could compromise the long-term viability of these ecosystems and perhaps impact the estimated one million species that depend on coral reef habitat.

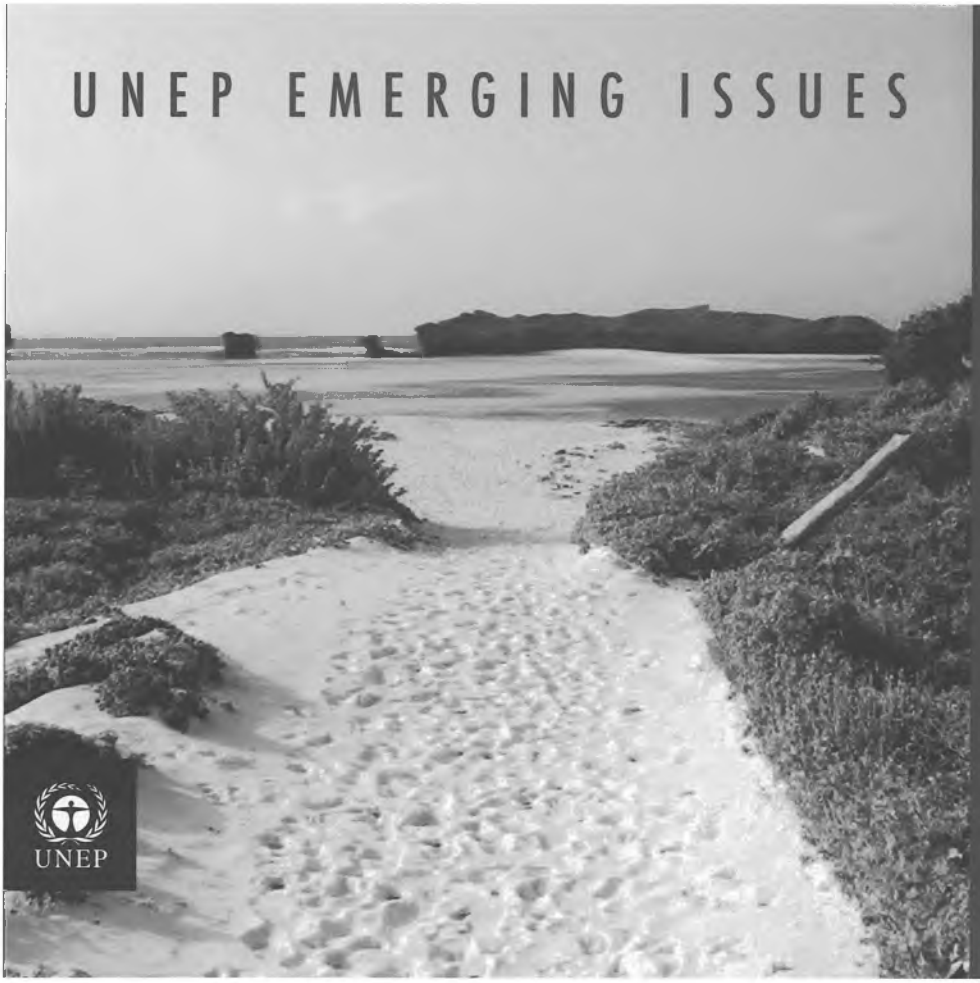
Ongoing research is showing that decreasing pH may also have deleterious effects on commercially important fish and shellfish larvae. King crab, herring and cod exhibit high mortality rates in carbon dioxide-enriched waters. The calcification rates of the edible mussel and Pacific oyster decline linearly with increasing carbon dioxide levels. Since 2006, some oyster hatcheries in the Pacific Northwest have experienced mass mortalities of oyster larvae in association with a combination of factors, including the upwelling of cold, carbon dioxide-rich waters. Scientists have also seen a reduced ability of some types of marine plankton to produce protective carbonate shells. These organisms are important food sources for other marine organisms. One type of free-swimming mollusk

called a pteropod is eaten by organisms ranging in size from tiny krill to whales. Pteropods are a major food source for North Pacific juvenile salmon, and are also food for mackerel, herring, and cod.

Since ocean acidification research is still in its infancy, it is impossible to predict exactly how these impacts will cascade throughout the marine food chain and affect the overall structure of marine ecosystems. It is clear, however, from both the existing data and from the geologic record that some coral and shellfish species will be negatively impacted in a high- carbon dioxide ocean. The rapid disappearance of many calcifying species in past extinction events has been attributed, in many cases, to ocean acidification events. Over the next century, if carbon dioxide emissions are allowed to increase as predicted by business as usual carbon emissions scenarios, humankind may be responsible for making the oceans more corrosive to calcifying organisms than at anytime in the last 20 million years.

The impact of ocean acidification on fisheries and coral reef ecosystems could reverberate through the U.S. and global economy. The U.S. is the third largest seafood consumer in the world with total consumer spending for fish and shellfish around $70 billion per year. Coastal and marine commercial fishing generates upwards of $35 billion per year and employs nearly 70,000 people. The total value of U.S. commercial harvests from U.S. waters and at-sea processing was approximately $4 billion in 2007.

In conclusion, ocean acidification is caused by the buildup of carbon dioxide in the atmosphere and can have significant impacts on marine ecosystems. Ocean acidification is an emerging scientific issue and much research is needed before all of the ecosystems' responses are well understood. However, to the limit that the scientific community understands this issue right now, the potential for environmental, economic and societal risk is quite high, hence demanding serious and immediate attention. Thank you, Mr. Chairman and members of the committee, and I look forward to answering any questions.



UNEP EMERGING ISSUES

ENVIRONMENTAL CONSEQUENCES OF OCEAN ACIDIFICATION: A THREAT TO FOOD SECURITY

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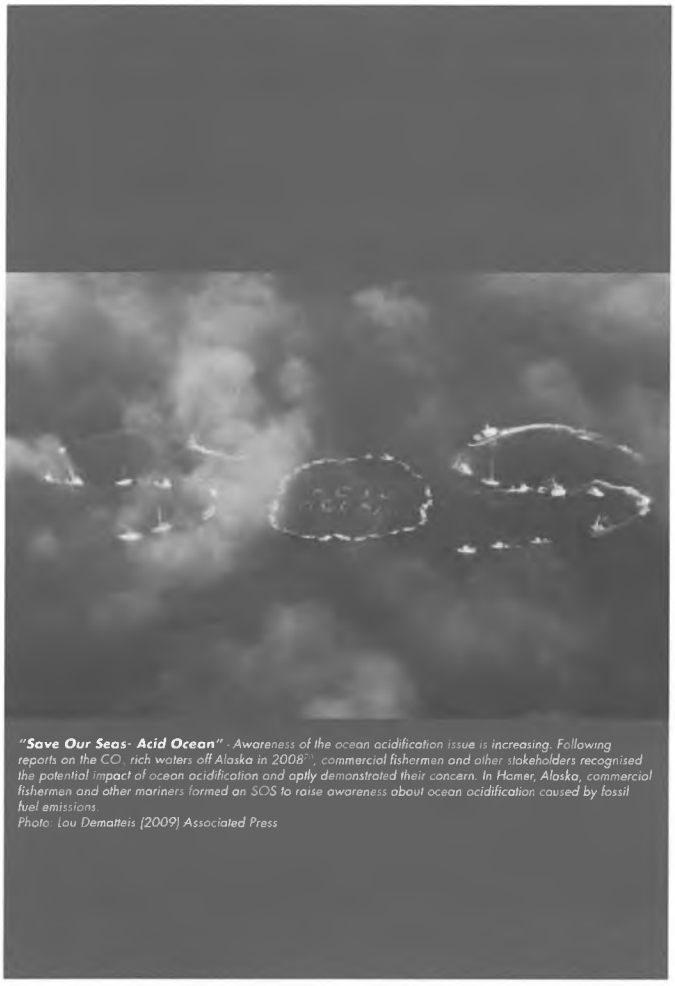
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"Save Our Seas- Acid Ocean" *- Awareness of the ocean acidification issue is increasing. Following reports on the CO_2 rich waters off Alaska in 2008[21], commercial fishermen and other stakeholders recognised the potential impact of ocean acidification and aptly demonstrated their concern. In Homer, Alaska, commercial fishermen and other mariners formed an SOS to raise awareness about ocean acidification caused by fossil fuel emissions.*
Photo: Lou Dematteis (2009) Associated Press

1. Introduction

Increased carbon dioxide (CO_2) from the burning of fossil fuels and other human activities continues to affect our atmosphere, resulting in global warming and climate change[1]. Less well known is that this carbon dioxide is altering the chemistry of the surface oceans and causing them to become more acidic[2]. From scientists and marine resource managers, to policy and decision-makers, there is growing concern that the process called ocean acidification could have significant consequences on marine organisms which may alter species composition, disrupt marine food webs and ecosystems and potentially damage fishing, tourism and other human activities connected to the seas[3].

Ocean acidification, which affects the carbonate chemistry of the ocean, is directly caused by greater atmospheric emissions of CO_2[4]. These emissions have increased over the last 200 years, primarily due to intensified industrialisation and agriculture resulting in greater burning of fossil fuels, cement manufacturing and land use change[4]. Many organisms depend on the relatively stable balance of carbonate chemistry which has endured for millions of years until the onset of the industrial revolution. Since then there has been a 30% decrease in pH and a 16% decrease in carbonate ion concentrations. Carbonate ions are used by organisms to make shells and reef systems thus it may be more difficult for organisms to do this in the future as carbonate ions decrease further. These organisms are a human food source (e.g. molluscs), provide food for fish (e.g. pteropods are eaten by salmon) and create ecosystems and refuges for fish (e.g. coral reefs). As CO_2 emissions continue to rise, ocean acidification is rapidly becoming a critical issue with the potential, if unabated, to affect many species and their ecosystems, pertinently including those associated with human food resources. Ocean acidification is happening now, is measurable and will increase as more CO_2 is emitted[5]; it is likely that if CO_2 emissions continue at the same rate ocean acidification will have a considerable influence on marine-based diets for billions of people worldwide.

Ocean Acidification: Simple chemistry - Global impact

The basic chemistry of sea water is being altered on a scale unseen within fossil records over at least twenty million years[6], and it is happening at an unprecedented rate not experienced in the last 65 million years[7]. The chemistry is straightforward: when CO_2 enters seawater it produces a weak acid known as carbonic acid, which is unstable and leads to an increase in hydrogen ions. These ions increase ocean acidity, measured as lower pH, and reduce carbonate ion saturation[3, 8].

The pH scale is logarithmic and measures how acidic or alkaline a substance is; it ranges from 0 - strong acid to 14 - strong base while 7 on the scale indicates neutral. The oceans are naturally alkaline, with a mean surface ocean pH of about 8.2 in 1750. Today surface ocean acidity has increased by 30% (resulting in a drop in mean pH of 0.1 to about 8.1 on the logarithmic pH scale) due to the vast amount of man-made CO_2 absorbed by the oceans since pre-industrial times – an estimated 500 Gigatonnes or 25% of that emitted to the atmosphere[4]. If we continue at this rate the ocean pH will decline by a further 0.3 by the end of this century, an unprecedented 150% increase in ocean acidity[2, 9]. This rate of change has not been experienced for around 65 million years, since the dinosaurs became extinct.

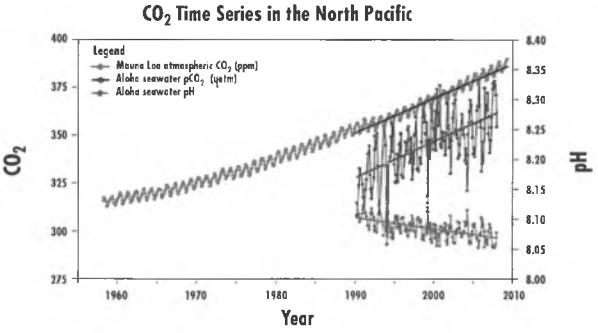
Such a major change in basic ocean chemistry is likely to have substantial implications for ocean life in the future, especially organisms that require calcium carbonate to build shells or skeletons[3, 9-11]. Not all organisms will react at the same rate or in the same way to decreasing carbonate ion concentration[12 13]. There are three naturally occurring forms of calcium carbonate used by marine organisms to build shells, plates or skeletons: calcite, aragonite and high-magnesium calcite. For example, microscopic plants called coccolithophores surround themselves with protective calcite plates; aragonite is used by pteropods to build their shells and corals use it to make their skeletons that help to form reefs; while some echinoderms – starfish, sea urchins, brittle stars - utilise magnesium calcite to form their exoskeletons[2, 10]. Magnesium calcite is more soluble and sensitive to ocean acidification than aragonite; with calcite being the least soluble of the three. A lowering of pH and reduction of carbonate ions will make it more difficult for organisms to sustain their calcified shells, and in undersaturated conditions, waters become corrosive to these minerals.

Additionally, most multicellular marine organisms have evolved a regulatory system to maintain the hydrogen ion balance of their internal fluids[14] and spend energy doing this so an increase in hydrogen ions in seawater means that they will have to divert more energy away from important processes such as growth and reproduction to do this. However, studies of mussels, crab and sea urchin species have shown they have only a partial or no, compensation mechanism[15] potentially making them more vulnerable than those organisms that possess a compensation mechanism.

2. CO_2, climate change and ocean acidification

Seawater acidity varies across the oceans with temporal changes reflecting seasonal changes in biological activity (Fig. 1) and geographical variations depending on other factors such as seawater temperature and depth[4, 5]. However, ocean observations at a station off Hawaii over the last 20 years show increases in seawater CO_2 and decreases in seawater pH clearly tracking increases in atmospheric CO_2 (Fig. 1). The global ocean average pH was 8.2 before industrialisation but ocean acidity has risen as the oceans have absorbed increased amounts of CO_2 emissions. Consequently, there has been a decrease in pH of 0.1 which, significantly, represents a 30% increase in seawater's acidity[2-4].

Figure 1: The Mauna Loa records of atmospheric CO_2 over the last 50 years with the surface ocean CO_2 and pH recorded off Aloha Station during the last two decades from the Hawaii Ocean Time-Series. Seawater CO_2 concentration mirrors the increases in the atmosphere and as seawater CO_2 concentration increases pH drops.

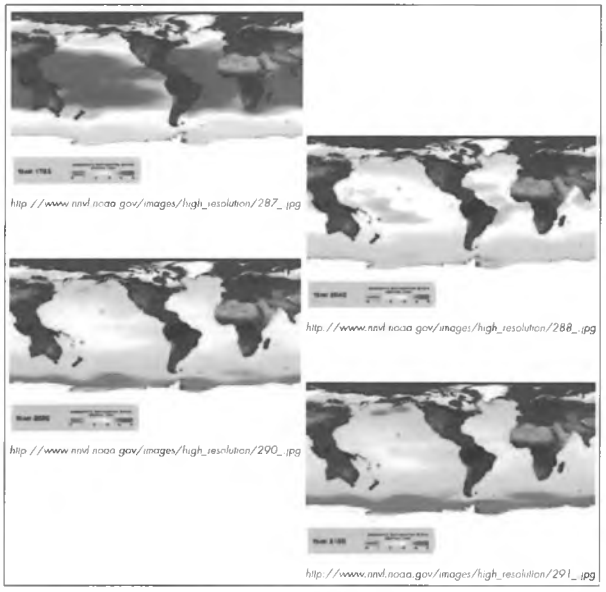


Source: Feely et al. (2009)[2].

Estimates[2] of future trends in ocean acidification can be made for different CO_2 emission scenarios, such as those published by the IPCC[1]. Based on current rates of CO_2 emissions, projections show that by the end of the 21st century, global ocean pH will decrease by a further 0.3 units, which represents a total increase in acidity of 150%[2] (Fig. 2). If ocean pH continues to decrease, this could lead to the loss of some shell or skeleton forming organisms[3, 9-11]. Eventually, the sediments in the oceans will buffer these chemical changes but chemical recovery from such events may take tens of thousands of years[16] while a return to the biological status quo, even if possible, could take millions of years[17].

However, organisms are already being subjected to higher levels of CO_2 and therefore lowered pH and increased acidity (Fig. 1)[2-5]. If these changes to ocean chemistry continue into the future they may affect the abundance, health, physiology, biochemical properties and behaviour of marine organisms, as adults and/or in their juvenile form[11, 18]. The key question regarding future food security is how ocean acidification will directly affect marine organisms consumed by humans or indirectly via the ecosystems that support them.

Figure 2: Model output showing the impact of ocean acidification on the ocean's carbonate saturation state (here showing aragonite saturation) in 1765, 2040, 2080, and 2100. The availability of calcium carbonate is predicted to decrease over the next century. Areas that are deep red are sufficiently acidic to dissolve unprotected calcium carbonate-based shells and skeletons. Most areas currently have enough calcium carbonate to support corals and other organisms, but all areas are predicted to decline by the year 2100 compared to pre-industrial values. The Arctic Ocean is not included in this model but other models focussing on the Arctic project that aragonite undersaturation will occur within decades even before the Southern Ocean[73].

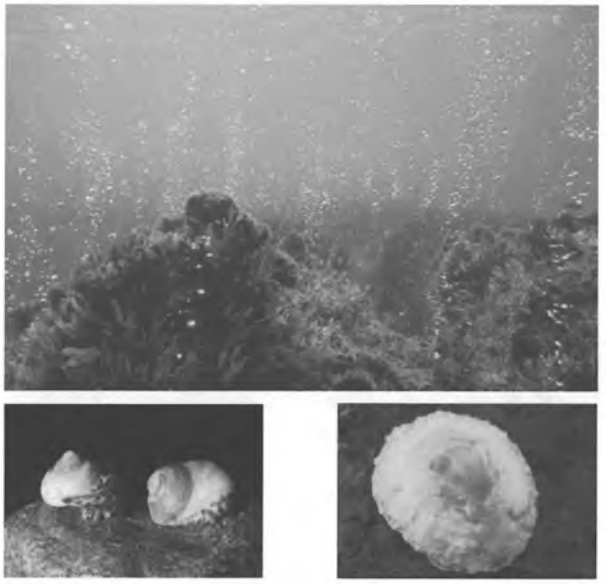


Source: Model courtesy of NOAA Environment Visualization Laboratory. Amended from Orr et al. (2005)[9].

CO_2 vents – an insight into how biology may react in a future high CO_2 ocean

In some areas of the world, volcanic vents are pouring almost pure CO_2 into the marine environment, so acting as 'windows' on how biology may react to a future 'high CO_2 ocean' (Fig. 3). Recent studies of a Mediterranean vent in shallow waters revealed key ecosystem changes in high CO_2 areas compared to normal CO_2 areas[19]. Certain algae and seagrasses were found to grow more efficiently closer to the vents where there was also a large reduction in biodiversity, notably a loss of calcifying organisms adjacent to the vents where the pH was lowest. Sea urchins were found to be the most sensitive to these changes.

Figure 3. Natural CO_2 vents from Ischia in the Mediterranean showing productive seagrass beds (top) but shells of calcifying organisms are pitted and corroded (below) due to the increased acidification of these waters.



Source: Hall-Spencer et al. (2008) Nature[19].

A significant combination of ocean stressors

Ocean acidification is occurring alongside other climate-related stressors, such as ocean warming, sea-level rise, and, possibly, changes to precipitation and increased storminess[1]. These are compounded by other non-climate related impacts, including over-fishing and pollution, which add pressure to already strained marine ecosystems that provide food for human consumption[20]. The combination of rising temperature and increasing acidity on organisms is likely to be worse than either on its own, for example, the range of temperature tolerance for the edible crab may be reduced in more acidic waters[21].

3. Marine food resources and ocean acidification

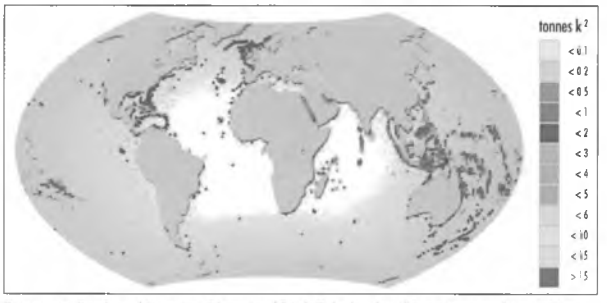
The significance of the marine environment as a food source

The contribution of marine protein to global food security is substantial. Fish, including shellfish, contribute 15% of animal protein for three billion people worldwide[22]. A further one billion people rely on fisheries for their primary source of protein. Fish are even more important in countries where other protein sources decline seasonally[23].

Primary production forms the basis of the marine food web and is of great importance to maintaining fish stocks. Production is highest in areas rich in nutrients, such as upwelling zones and continental shelf areas. Globally approximately 80% of fish catch are from such areas (Figure 4).

Productivity 'hotspots' such as upwelling regions where cold water is rich in both nutrients and CO_2, coastal seas, fronts, estuaries and sub-polar regions often supply the main protein source for coastal communities. However, many of these areas are also projected to be very vulnerable to ocean acidification this century[24, 25]. As world populations rise alongside a predicted growth in coastal populations due to internal migration, the demand for ocean protein products is also likely to rise[23, 26]. Fish stocks, already declining in many areas due to over-fishing and habitat destruction[20, 22, 27], now face the new threats posed by ocean acidification[28].

Figure 4: The world's most productive fishing grounds are confined to major hotspots, less than 10% of the World oceans. The map shows annual catch (in tonnes per km^2) for the World's oceans. There is a strong geographic concurrence of continental shelves, upwelling and primary productivity and the amount of fish caught by fisheries. The map shows global fisheries landing annual average for the period 2001 to 2006 (updated August 2010).



Data source: Sea Around Us project, (University of British Columbia, http://www.seaaroundus.org). Map designed by Dr. Reg Watson (http://ecomarres.com). Used with permission

It may therefore be no surprise that the aquaculture industry is the fastest growing food producer worldwide, increasing at a rate of 7% per annum, and is widely touted as the panacea for dwindling fisheries. The proportion of fish produced by aquaculture and consumed by humans worldwide rose to 50% of total production in 2009[29].

Food Security

"Food security is a condition when all people, at all times , have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active healthy life"[30].

In local communities, the smaller fish species are often exploited because they are usually the most numerous and accessible[22, 23, 27]. Frequently eaten whole, they also provide other dietary requirements, such as essential oils, minerals and trace elements. Fish are not only the single most important source of protein for some subsistence communities; they also may provide a small income stream that enables the purchase of other staple foods like rice.

However, as small fish occur in large numbers they are also targeted by industrial fisheries to manufacture fish oil and meal for use as a food stock, for example in aquaculture, where fish are used to feed fish[29]. Fish such as trout, tilapia and salmon, and an increasing number of marine species rely on this fish meal, thus placing local resources under an accumulation of pressures.

Invertebrates such as mussels, lobsters and shrimp may be regarded as niche luxury foods but also provide significant income for many poor coastal peoples. As shell growth and physiology are sensitive to increases in ocean acidity, the production and quality of many of these invertebrate species is at risk; they are the most vulnerable group in the aquaculture sector. Some cultured invertebrates also rely on those same small fish used to feed cultured finfish, as well as local human populations, so adding to the accumulation of pressures facing these limited but important fish resources.

Wild fisheries, shellfisheries and aquaculture are therefore of great importance to current and future food security[27]. However, these industries are now also at risk from future ocean acidification both directly through the impact on the organisms themselves and indirectly through the food webs and habitats they depend on.

Threats of ocean acidification

Although studies about the effects of ocean acidification on marine resources are comparatively new, early results indicate there is no room for complacency. The effect of increased acidity on adult finfish seems minimal in the species investigated[14]. However, their orientation and balance mechanisms as well as behaviour may be sensitive to ocean acidification[31, 32, 74]. The effects on finfish larval and egg stages are not yet understood. However, valuable breeding and feeding habitats are at risk. For example, coral reefs, which underpin many marine fisheries in the tropics, are already under pressure due to destructive fisheries practices, land based pollution and sediment loading, heat stress and coral bleaching[33]. These delicate ecosystems are especially prone to the effects of ocean acidification[34, 35].

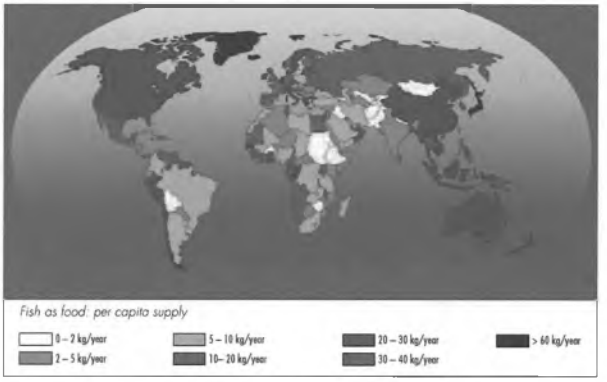
Certain habitats and species of sea grass might 'benefit' from increased seawater CO_2; however many animals that rely on these for food and shelter may be negatively affected[19]. The impact of ocean acidification on ecosystems, with the possible exception of coral reefs, is largely unknown. The ability of many planktonic organisms to build skeletons decreases as seawater becomes more acidic but the response is not uniform[12, 36]. Marine ecosystem responses are speculative due to their complexity. However, polar and sub-polar marine ecosystems are projected to become so low in carbonate ions within this century (Fig. 1) that waters may become corrosive to unprotected shells and skeletons of organisms currently inhabiting these waters[9, 73]. Also changes in reproduction, larval development, growth efficiency, behaviour and competition may affect the number and kinds of species in existence, while all of these factors could potentially affect food chains.

a. Fishery threats

Finfish make up the majority of the global catch (over 80%) and are the most significant source of marine protein for human consumption (Figure 5). Most finfish are carnivorous and so depend on the healthy functioning of complex marine food chains. Direct effects on swimming performance of adult finfish such as cod are unlikely due to their inbuilt ability to regulate their internal pH[75]. However, in young clownfish there may be orientation problems due to variable otolith growth rates[31] and altered behaviour towards their predators through impacting their olfactory cues which may increase mortality and impact replenishment of fish populations[32, 74].

The indirect effects of changes in their prey, and loss or damage to their habitats are currently considered more significant than direct impacts. For example, shelled pteropods produce aragonite shells, and observations and controlled experiments show that they will be particularly sensitive to ocean acidification[9, 37]. Pteropods often occur in high densities and form a major dietary component for higher predators such as herring, salmon, whales and seabirds[9].

Figure 5: Average per capita fish supply 2003-2005 (in live weight equivalent)



Source: The State of World Fisheries and Aquaculture, 2008, World Fisheries (FAO22).

Ocean acidification has also been tentatively linked to increased jellyfish numbers[38] and changes in fish abundance. Jellyfish are key predators in many of the world's pelagic systems; they can affect the abundance of zooplankton, fish larvae and eggs, which affects the survival to the adult stage (or recruitment) of fish populations[39]. As jellyfish are rarely the preferred food for other marine animals[40], any significant increase in their numbers could have major consequences for pelagic ecosystems and fisheries.

Furthermore whilst echinoderms such as sea urchins, starfish, brittle-stars and sea cucumbers are locally significant as a food source, globally they make up only a small percentage of overall catch. However, these species are a critical link in fish food chains; the majority of those studied show great vulnerability in adult, juvenile and egg stages to future levels of ocean acidification[41-45].

b. Coral reef threats

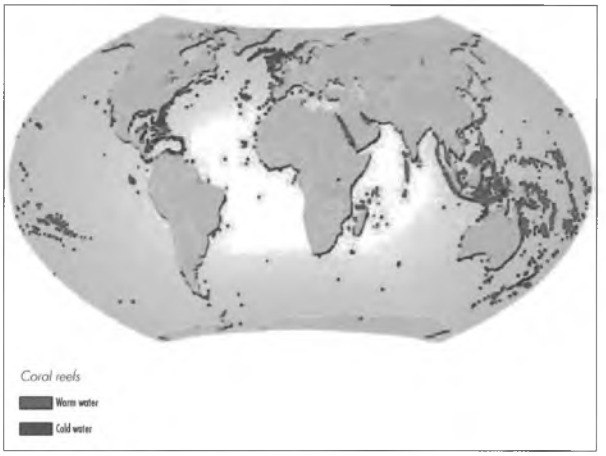
Corals form the most biologically diverse marine ecosystems and grow from the tropics and mid-latitude to even high latitude cold waters (Fig 6). Tropical reefs provide shelter and food for an estimated 25% of known marine fish species, and account for between 9-12% of world fish landings. Consequently, these coral reefs provide food and livelihood security for some 500 million people worldwide. Significant reef loss would, therefore, impact marine biodiversity, threaten the survival of coastal communities through reduced food sources and reduce the capacity of nearby coastlines to buffer the impact of sea level rise, including increased storm surges[33].

It is anticipated that future ocean acidification will affect adult and juvenile coral growth and recruitment[46], coralline red algae growth[47], reef structural integrity[48] and potentially even the density of bio-eroding grazers and predators[34].



Scleractinian corals and algal assemblage, including coralline algae. Growth and skeletal integrity of scleractinian corals and coralline algae are likely to be compromised by ocean acidification.
Source: Andrey Ringler / UNEP

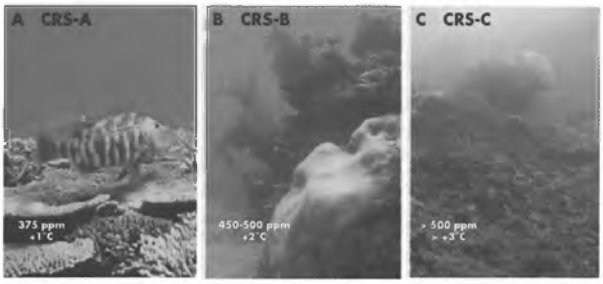
Figure 6. Distribution of coldwater and tropical coral reefs. The coldwater reefs are highly susceptible to ocean acidification, which has its greatest impacts at high latitudes. Tropical reefs will become severely damaged by rising sea temperatures.



Data source: UNEP World Conservation Monitoring Centre, 2005. Map by Hugo Ahlenius, UNEP/GRID-Arendal. http://maps.grida.no/go/graphic/distribution-of-coldwater-and-tropical-coral-reefs

This challenge to coral reefs is in addition to the threat of increasing sea surface temperatures, a major cause of coral bleaching[34]. The combined impact of ocean warming and acidification as well as over-fishing and pollution increases the stress on coral reef ecosystems. Researchers estimate that a CO_2 stabilization scenario of less than 450 ppm is essential for the survival of many coral reefs[34, 35], and more reefs will decline (Fig 7) if CO_2 concentration exceeds this limit[49].

Figure 7. Examples of reefs from Australia's Great Barrier Reef which are used as proxies to indicate what future coral reefs may look like in a high CO_2 world under different CO_2 scenarios. The atmospheric CO_2 and temperature increases shown relate to the scenario, not the locations photographed. (A) Reef slope communities at Heron Island; (B) Mixed algal and coral communities associated with inshore reefs around St. Bees Island near Mackay; (C) Inshore reef slope around the Low Isles near Port Douglas.



Source: Hoegh-Guldberg et al. (2007) Science[34].

Even cold water corals which generally live in deeper and colder waters (Fig. 6) are important feeding and nursery grounds for finfish and like their tropical cousins are vulnerable to ocean acidification[50-52].

c. Threat to aquaculture

Marine invertebrates like molluscs and crustaceans (Fig 8), increasingly used in aquaculture, show negative responses to acidification at various life stages. An organism's success depends on more than just the growth of its adult form. The life cycle of invertebrates from egg fertilization and development, to growth and timing of different juvenile larvae stages to their settlement, are critical to their own survival as well as that of both their prey and predators[11]. As most shellfish eggs and larvae are planktonic, these species are prone to the negative effects of ocean acidification. One study on the early development of the oyster (*Crassostrea gigas*) shows that shell calcification is reduced in juveniles; their body shape and size are altered, which suggests serious consequences for their survival into adulthood[53].

Figure 8: Some invertebrate food species that have shown sensitivity as adults or in other parts of their life cycles to ocean acidification.



Top left: Mussels beds (Rob Ellis/PML), Top right: Oyster tables (Steve Widdicombe/PML), Mid left: Lobster (Kelly-Marie Davidson/PML), Mid right: Spiny lobster (Kelvin Boot/PML), Bottom left: Sea urchin (Kelvin Boot/PML) and Bottom right: Edible crab (Kelvin Boot/PML).

Molluscs account for 8% of the global marine catch, but are increasingly important in the growing aquaculture industry. Clams, scallops, mussels, oysters, abalone and conchs provide direct protein sources for various island and coastal communities and are valuable commercial fisheries. As well as providing food some species play an important role in forming and maintaining habitats for other species (e.g. mussel beds, Fig 8). Many mollusc species at the adult and juvenile stages have shown reduced growth and/or health under projected ocean acidification scenarios[53-63].

Crustaceans such as prawns, lobsters and crabs currently comprise 7% of global seafood consumption through both wild and aquaculture species. They are significant locally for subsistence fishing and at larger commercial scales. Studies on the effects of ocean acidification have only been conducted on a few crustacean species[13, 64-68]. However, some of these studies show their vulnerability to elevated seawater CO_2 as adults and juveniles while another shows that the ability to tolerate a range of temperatures is reduced[66].

4. Conclusion

There are numerous reasons to be concerned about ocean acidification and its future impact at the species and ecosystem level. If ocean acidification continues disruptions to food chains and direct and indirect impacts on numerous species are considered likely with consequent risk to food security.

Habitat destruction, overfishing, climate change and pollution are significantly impacting fishery products and food security and national economies[69-71] and mitigation of these impacts requires coordinated action at the highest levels. Ocean acidification acts in addition to these stressors[28]. All marine environment stakeholders and the policy makers responsible for environmental or food security issues need to become more aware of the potential effects and consequences of ocean acidification[72].

Emerging challenges and their implications

There is a need to more fully understand the effects of ocean acidification on various marine organisms at different stages of the lifecycle including the ecosystem level impacts. Critical species within ecosystems or food chains that act as food sources should be a priority for research. Impacts from ocean acidification must be understood within the wider context of other real and potential threats such as from climate change and pollution as well as global trends in world fisheries and aquaculture[69-71]. The obvious solution to the potential threats posed by ocean acidification is to make rapid and substantial cuts to anthropogenic CO_2 emissions to the atmosphere and hence, oceanic CO_2 concentrations. However, the likelihood is that this will not occur in the immediate future. Ocean acidification is a rapidly emerging issue with many nations starting to invest in research into the potential future impacts on organisms, ecosystems and food providing products in earnest[72]. So, based on existing information, which may change as new data emerges, the following actions are judged necessary to mitigate the risk of effects of ocean acidification:

- Recognize the security, economic and cultural importance of those marine species and habitats that are currently exploited.
- Determine the vulnerability of fish-dependent human communities in terms of exposure, sensitivity and the capacity to adapt to changes resulting from ocean acidification.
- Identify species that are more flexible to change and which may encroach on habitats and survive in altered conditions and assess how these may affect ecosystems and food security.
- Reduce other pressures on food fish stocks to provide the best chances of success through, for example, marine spatial planning or re-evaluating available resources and their usage.
- Assess the options for development of environmentally sustainable 'aquaculture' options using species that are resistant to lowered pH or can be kept in conditions of controlled pH.
- Consider the positive and negative impacts of a chain of substitute habitats such as artificial reefs to provide the diversity of niches that are found in existing habitats.
- Embrace the science and ramifications of ocean acidification and climate change into fisheries management tools.
- Alongside efforts to further investigate the effects and consequences of ocean acidification, foster increased awareness of this issue through diverse media.

Further Reading

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UNEP

Robert Himschoot

Box 1061

Dillingham, Ak 99576

Representative Beth Kerttula

State Capitol Rm 404

Juneau Ak, 99801

Dear Representative Kerttula,

I am writing in support of your Resolution recognizing the potential threat and supporting increased research of Ocean Acidification, HJR10.

As a resident of Dillingham and a commercial fisherman I share your concern. I believe the effects of Ocean Acidification pose the gravest risk to the way of life I love, the community and region I call home.

The State of Alaska needs to recognize the danger and accept responsibility for mitigation, along with Federal government. This Resolution is a responsible step towards that goal.

Robert Himschoot

City Councilman

Dillingham, Alaska

Alaska Conservation Alliance

"A Strong Economy and Healthy Environment Go Hand in Hand"

March 24, 2011

Representative Beth Kerttula
State Capitol, Rm. 404
Juneau, AK 99801

Dear Rep. Kerttula:

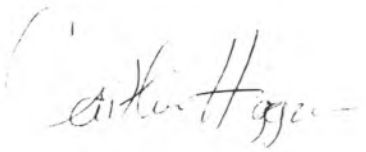
The Conservation Alliance supports HJR 10, recognizing the threat of ocean acidification to Alaska and urging the Federal government to increase monitoring and research on the topic. The Alaska Conservation Alliance is an umbrella group for approximately 40 member organizations with a combined membership of over 38,000 Alaskans. We serve to advance conservation with decision-makers in Alaska. The Alliance believes that a healthy environment and a strong economy go hand in hand.

Ocean acidification poses a threat to marine ecosystems in Alaska and, in turn, threatens coastal communities, businesses reliant on the ocean, and subsistence. Our oceans are already becoming noticeably more acidic and this is starting to harm base species in the food chain. Disruptions to the food chain will negatively affect fish, whales, walruses, seals, and sea birds among other species. Acidification may also improve conditions for invasive species. If other states' dealings with invasive species are an indication, the economic cost to businesses, local communities, and the state could be in the millions. These impacts will harm Alaskan fisheries and subsistence lifestyles.

Addressing ocean acidification requires coordination between the state and Federal government, and among countries to decrease carbon emissions. The Federal government must increase efforts to monitor and research ocean acidification's effects particularly in more sensitive areas like the Arctic and Northern Pacific. Strong action must also be taken to climate change pollutants like carbon dioxide.

The Conservation Alliance strongly supports the Alaska State Legislature taking a stand against ocean acidification and directing the Federal government to increase efforts on the issue.

Sincerely,



Caitlin Higgins
Executive Director
Alaska Conservation Alliance

810 N Street, Suite 203 | Anchorage, AK 99501 | 907-258-6171 | F: 907-258-6177
www.akvoice.org | www.twitter.com/ACAAlliance
www.facebook.com/AlaskaConservationAlliance

Dear Representative Kerttula:

I am a retired Professor Emeritus of Marine Science at the University of Alaska Fairbanks. I have spent many years studying carbon dioxide in the atmosphere and ocean especially in the polar regions. Early in my career I conducted a monitoring program for carbon dioxide in the atmosphere at Barrow, AK and on various floating ice stations on the Arctic Ocean. I have read House Joint Resolution No. 10 which you are sponsoring and wish to endorse support of this resolution for expanded research concerning the detrimental effects of ocean acidification.

It is a well documented fact that carbon dioxide has been increasing in the atmosphere since the industrial revolution in the 19th century. Some of that carbon dioxide is absorbed in the world's oceans which should lead eventually to a more acid environment. This process is well summarized in the HJR Resolution No. 10. It has only been in recent years that slight shifts in oceanic pH to a more acidic ocean have been noticed with implications for damage to sealife. HJR 10 correctly cautions that increased ocean acidification will have a widespread ripple effect on fisheries from the smallest organisms to the commercial fisheries. Implications for economic consequences of ocean acidification are obvious.

Research and monitoring related to ocean acidification is still at a very early stage world-wide especially as to how the effects of ocean acidification can be best addressed. Potential damage to Alaska's marine ecosystems will translate to losses to the state's economy through effects on fisheries and tourism. The data base for an increasing ocean acidic environment has improved in recent years, but is far from adequate to meet the assessment needs. I strongly support HJR No. 10.

John J. Kelley, Ph.D.
Professor Emeritus, Marine Science
School of Fisheries and Ocean Sciences
University of Alaska Fairbanks
Fairbanks, AK 99775-7220
Tel: 907 474 5585
fax: 907 474 7204
email: jjkelley@alaska.edu
Skype: glacier92

Letter of support for resolution HB10 from Dr. Switgard Duesterloh, Kodiak, Alaska
02/11/2012

Dr. Switgard Duesterloh
P.O. Box 2787
Kodiak, AK 99615
(907) 481 3867

Representative
Beth Kerttula
State Capitol Room 404
Juneau AK, 99801

Regards: **Resolution HB10 Ocean Acidification**

To whom it may concern,

I would like to thank representative Kerttula for her efforts in drafting HB10, and express my support for this much needed resolution regarding the recognition of the effects of ocean acidification on Alaska's residents and economy.

Before I get into my reasoning, allow me to introduce myself and explain my stake in this issue. My name is Switgard Duesterloh, I am a fisheries scientist, and currently work in science education. Over the last three years, I have initiated an Ocean Science Discovery Program in Kodiak, working closely with the school district and the research community, introducing hands-on marine science units for all students in grades 3,4,5,6, and 7, and some high school classes, in the public school system. Working closely with the researchers at the NMFS Kodiak laboratory, I have developed ocean acidification science units for 6^{th} and 7^{th} grade, and taught these for the past two years. I live in and love Alaska for its natural beauty, breathtaking magnificence and abundant life forms, which I work hard to protect and preserve for future generations. I am writing this letter of support in my roles as a concerned Alaska citizen, parent, educator, and Board member of the Alaska Marine Conservation Council.

HB10 summarizes distinctly the results and conclusions of the early phases of research into Ocean Acidification. While there is much that remains unknown and researchers continue to struggle to collect much needed oceanographic and bioscience data, many of the described effects of OA are based in simple chemical reactions, which can be modeled with relative certainty. When researchers present time lines of temperatures, atmospheric CO_2 content and average global ocean pH, the message is not that present concern is based on change, but rather the unprecedented rate of change in these parameters. We are presently experiencing conditions in the world oceans that are unprecedented for not only the timeframe humans have lived on earth but even millions of years into the past. This, combined with research showing that species extinction in the world's rainforests proceeds at a rate faster than any accounted for in fossil records, should warrant concern and political action. I support HB10 to recognize OA and anticipate the effects of these global changes to the economy and quality of life in the state of Alaska.

Sincerely,

Switgard Duesterloh

Dr. Jeremy T. Mathis
Assistant Professor
(907) 474-5926
jmathis@sfos.uaf.edu
www.sfos.uaf.edu/oarc

UNIVERSITY OF ALASKA FAIRBANKS

School of Fisheries and Ocean Sciences
245 O'Neill Building, University of Alaska Fairbanks, P.O. Box 757220, Fairbanks, Alaska 99775-7220

February 8th, 2012

Subject: Letter of Support for HJR 10

Dear Representative Kerttula,

I am writing to express my strong support for House Joint Resolution 10 that outlines the need for additional research funding for ocean acidification and its impacts to Alaska. I am the director of the Ocean Acidification Research Center and a Professor of Chemical Oceanography at the University of Alaska Fairbanks. I have spent my entire career working on the issue of ocean acidification in Alaska, and I can tell you unequivocally that the State is not yet prepared to deal with the potential consequences of this phenomenon.

The World's oceans have absorbed more than a quarter of the carbon dioxide released into the atmosphere from the burning of fossil fuels and changes in land use. This excess, or anthropogenic carbon dioxide has fundamentally altered ocean chemistry, making ocean surface waters 30 percent more acidic than they were at the start of the Industrial Revolution. If left unchecked, acidity near the surface could double by the end of this century. Even more alarming for Alaska is that the process of ocean acidification is accelerated in the Pacific-Arctic region because carbon dioxide is more soluble in colder water, and lower salinity waters from rivers, glacier discharge, and sea ice melt diminishes the capacity of our coastal seas to buffer against acidification. There is now clear and indisputable evidence that ocean acidification is both more severe and occurring more rapidly in the coastal waters of Alaska compared to other places in North America.

It is very likely that ocean acidification will create conditions that are detrimental to marine ecosystems in the Gulf of Alaska, the Bering Sea and the Arctic Ocean within a few decades, if not sooner by impacting the growth, reproduction, and physiological processes of many marine organisms. The most direct impacts will likely be felt by carbonate-forming species, such as crabs, clams and oysters but it will also effect marine plankton that occupy the base of the food webs that support the vast commercial fisheries around the State, such as salmon and Pollock.

We cannot afford to wait any longer to make the necessary investments that will allows us to develop sound management strategies to keep our fisheries sustainable as the oceans become more acidic. To do this, we need a better fundamental understanding of ocean acidification in Alaska through increased observations, species studies and economic modeling. HRJ-10 is an excellent step towards achieving these goals. Please let me know if there is anything I can do now or in the future to support this effort.

Sincerely,

Jeremy T. Mathis – Ph.D.

Kachemak Shellfish Mariculture Association
3851 Homer Spit Road, Homer, Alaska 99603 (907)-235-1935 AlaskaOyster.org

Alaskans

Please know Kachemak Shellfish Mariculture Association is in support of increased research devoted to the understanding of ocean acidification as identified by the Alaska House Joint Resolution number 10 as introduced in the twenty-seventh legislature-first session.

Today the effects of ocean acidification are being seen worldwide and in Alaska. In 2011, Alaska's mariculture industry experienced a drastic shortfall of seed. As highlighted in the joint resolution, ocean acidification impacted industry and the available of seed from hatcheries supplying Alaska shellfish growers. For background information, in 2007, Whiskey Creek Shellfish Hatchery in Netarts Bay, Oregon, first drew attention to the issue of seed security and ocean acidification. With high mortality in their juvenile oysters the hatchery staff thought it was due to bacteria or other pathogens. Finding nothing, they turned to the ocean acidification issue and the pH levels of the water. Their research has identified this as the cause of the mortality. Acidic water, with a low pH, is suspected to be responsible for a significant decline in oyster larvae production as with many other shellfish hatcheries. It's also likely responsible for the lack of natural oyster recruitment in the Willapa Bay region of Oregon, as spawning events have not naturally occurred there in the past six years.

The mariculture industry in Kachemak Bay is very concerned about the impact ocean acidification will have in the coming years. Out of this concern, Kachemak Shellfish Mariculture Association in partnership with Kachemak Shellfish Growers Cooperative and the Alaska legislature has developed an oyster seed security demonstration project. With this it is anticipated that Alaska will have to develop several shellfish hatcheries to insure seed security as national and international seed sources are affected by ocean acidification.

In closing, we encourage sufficient funding for needed research into the cause, effects and options to address ocean acidifications impact on Alaska's mariculture industries. We know the research in this area is highly warranted as Alaska has the most to gain with our abundant shoreline and resources.

Thank you,

Gerald Andrews
KSMA President

Alaskan Shellfish Growers Association

February 10, 2012

Rep. Beth Kerttula
State Capitol
Juneau, AK 99801

Re: Support for HJR 10

Dear Rep. Kettula:

Just a few years ago ocean acidification seemed like a vague future concern to most Alaska shellfish farmers, but it has rapidly become a threat to our livelihoods.

Changing current ocean currents along the Oregon and Washington coasts have created upwelling events, bringing acidic water to the surface that has interfered with the delicate transition of free swimming larvae into tiny shellfish. This has resulted in oyster seed or "spat" shortages from California to Alaska.

The Alaskan Shellfish Growers Association recently launched an initiative to bolster in-state production of seed for shellfish farmers. In a report submitted to the legislature in January, ASGA found Alaska growers received only 40 percent of the 10 million oyster spat needed in 2011 and projected the shortages will result in $1.6 million over the next five years.

While ocean acidification wasn't the only reason behind the spat shortages, it was a major factor, and the problems along the Pacific Northwest coast show no signs of going away. We are concerned about increasing signs of potential problems with ocean acidification along our own coastline.

Unfortunately, there is very little monitoring of ocean acidification in the Gulf of Alaska and even less in our nearshore waters. That's why ASGA strongly supports HJR 10. Thank you for elevating this important issue.

Sincerely,

Rodger Painter
ASGA President

Rodger Painter, president
P.O. Box 20704 Juneau, AK 99802-0704
rodgerpainter@hotmail.com (907) 957-0704

ScienceDaily
Your source for the latest research news

Increased Ocean Acidification In Alaska Waters, New Findings Show



The pteropod (also known as a sea butterfly or swimming sea snail) may be one of the first marine organisms affected by ocean acidification. Pteropods make up nearly half of the pink salmon diet. This particular pteropod is the Limacina helicina helicina. (Credit: Photo by Russ Hopcroft, UAF School of Fisheries and Ocean Sciences)

ScienceDaily (Aug. 13, 2009) — The same things that make Alaska's marine waters among the most productive in the world may also make them the most vulnerable to ocean acidification. According to new findings by a University of Alaska Fairbanks scientist, Alaska's oceans are becoming increasingly acidic, which could damage Alaska's king crab and salmon fisheries.

This spring, chemical oceanographer Jeremy Mathis returned from a cruise armed with seawater samples collected from the depths of the Gulf of Alaska. When he tested the samples' acidity in his lab, the results were higher than expected. They show that ocean acidification is likely more severe and is happening more rapidly in Alaska than in tropical waters. The results also matched his recent findings in the Chukchi and Bering Seas.
"It seems like everywhere we look in Alaska's coastal oceans, we see signs of increased ocean acidification," said Mathis.

Often referred to as the "sister problem to climate change," ocean acidification is a term to describe increasing acidity in the world's oceans. The ocean absorbs carbon dioxide from the air. As the ocean absorbs more carbon dioxide, seawater becomes more acidic. Scientists estimate that the ocean is 25 percent more acidic today than it was 300 years ago.

"The increasing acidification of Alaska waters could have a destructive effect on all of our commercial fisheries. This is a problem that we have to think about in terms of the next decade instead of the next century," said Mathis.

The ocean contains minerals that organisms like oysters and crabs use to build their shells. Ocean acidification makes it more difficult to build shells, and in some cases the water can become acidic enough to break down existing shells. Mathis' recent research in the Gulf of Alaska uncovered multiple sites where the concentrations of shell-building minerals were so low that shellfish and other organisms in the region would be unable to build strong shells.

"We're not saying that crab shells are going to start dissolving, but these organisms have adapted their physiology to a certain range of acidity. Early results have shown that when some species of crabs and fish are exposed to more acidic water, certain stress hormones increase and their metabolism slows down. If they are spending energy responding to acidity changes, then that energy is diverted away from growth, foraging and reproduction," said Mathis.

Another organism that could be affected by ocean acidification is the tiny pteropod, also known as a sea butterfly or swimming sea snail. The pteropod is at the base of the food chain and makes up nearly half of the pink salmon's diet. A 10 percent decrease in the population of pteropods could mean a 20 percent decrease in an adult salmon's body weight.

"This is a case where we see ocean acidification having an indirect effect on a commercially viable species by reducing its food supply," said Mathis.

The cold waters and broad, shallow continental shelves around Alaska's coast could be accelerating the process of ocean acidification in the North, Mathis said. Cold water can hold more gas than warmer water, which means that the frigid waters off Alaska's coasts can absorb more carbon dioxide. The shallow waters of Alaska's continental shelves also retain more carbon dioxide because there is less mixing of seawater from deeper ocean waters.

Ask any coastal Alaskan and they will tell you that Alaska's waters are teeming with biological life, from tiny plankton to humpback whales. All of these animals use oxygen and emit carbon dioxide. Mathis and other scientists call this the "biological pump."

"We are blessed with highly productive coastal areas that support vast commercial fisheries, but this productivity acts like a pump, absorbing more and more carbon dioxide from the atmosphere," said Mathis. "Because of this, the acidity of Alaska's coastal seas will continue to increase, and likely accelerate, over the next decade."
Mathis said that it is still unclear what the full range of effects of ocean acidification will be, but that it is a clear threat to Alaska's commercial fisheries and subsistence communities.

"We need to give our policy makers and industry managers information and forecasts on ocean acidification in Alaska so they can make decisions that will keep our fisheries viable," said Mathis. "Ecosystems in Alaska are going to take a hit from ocean acidification. Right now, we don't know how they are going to respond."

Story Source:
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Web address: **http://www.sciencedaily.com/releases/2009/08/090813163158.htm**

SOS! Aerial Art Event, Homer, AK- September 2009

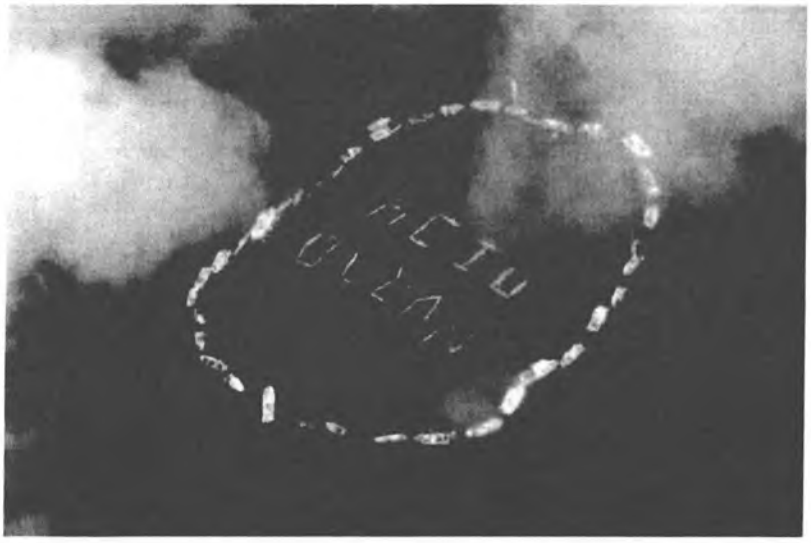
by Kelly Harrell— last modified October 06, 2010 05:43 PM

More Than 100 Boats Gather to Send Message of Protection from Acidification to Leaders



More than 100 fishing boats sail boats, skiffs and kayaks took to the waters of Homer Alaska on Sunday, September 6, 2009 as commercial fishermen, mariners and others from coastal communities spelled out an urgent message to protect jobs and fisheries from the threat of ocean acidification. The boats arranged themselves in the ocean to spell out "Acid Ocean SOS" as part of a 'Voices for the Ocean' event hosted by the Alaska Marine Conservation Council (AMCC) and Sustainable Fisheries Partnership (SFP) with International Aerial Artist John Quigley (www.SpectralQ.com).

Timed to spell out the message "Acid Ocean SOS" in the tight window that tides permitted, this Labor Day weekend event marked a rare collaboration between commercial fishermen and the conservation community in the region. Participants hope the 'SOS' will be heard by the US Congress and international leaders participating in the upcoming United Nations climate negotiations in Copenhagen, and that their call for help will result in definitive action to curb ocean acidification, referred to by scientists as the 'evil twin' of climate change.



"Fishermen and others who depend on Alaska's rich marine resources are coming together as one voice in support of reducing fossil fuel consumption and moving to a renewable energy future. This is the only real solution to ocean acidification and the time to act is right now," said Alan Parks, a small-scale family fisherman from Homer whose primary source of income is commercial fishing in Alaska. Parks helped organize fisherman for the event with Alaska Marine Conservation Council.

"Alaska's senators know that ocean acidification is a looming danger to our fisheries," said Parks. "This message from fishermen is to support our leaders in taking the necessary action now to reduce carbon emissions. Time is of the essence."

Parks and others are asking leaders to follow science and not politics, and with this 'SOS' are calling on state, national, and international leaders to protect the ocean from the acidifying, oxygen-depleting, and climate-altering impacts of uncontrolled fossil fuel emissions.

"This is the first significant show of numbers, vessels, and determination from the north pacific fishing industry, but it is not the last," said Brad Warren of the Sustainable Fisheries Partnership. "Some 3 billion people get their food from the sea and there are a lot of a people who want to keep it that way. We expect to see people from the seafood industry around the world taking up this same issue of ocean acidification with the same intent—to get a strong international carbon policy that protects oceans, fisheries and fishing industry jobs."

Aerial artist John Quigley, who has done similar actions on land and ice, but never before at sea, said, "This message from the sea is a call for people around the world to join in a visual declaration to urge leaders to immediately adopt a treaty that reduces greenhouse gas emissions, stabilizes the climate, and protects the oceans."

Recent research confirms that acidification is caused by billions of tons of carbon dioxide that rise from smokestacks and tailpipes every year and mix into the sea. In seawater, the gas forms an acid that attacks the foundation of marine food webs. The same pollution that drives climate change also undercuts fisheries around the world, especially in the vulnerable North Pacific off

Alaska and the Pacific Northwest, which produce more than two thirds of the U.S. seafood harvest. The North Pacific is a global repository for carbon dioxide in the oceans.

Supporters of the Homer event included the Alaska Marine Conservation Council (AMCC), the National Fisheries Conservation Center, the Sustainable Fisheries Partnership (SFP), and many participants from the fishing industry, Alaska coastal communities, and conservation groups.

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For more information contact Alan Parks, AMCC Homer Outreach Coordinator at 907.399.3096, alan@akmarine.org

4:54PM

Fri March 26, 2010

Ocean acidification a threat to local fisheries

By KUCB News

Unalaska, AK – The cold waters and currents of the North Pacific Ocean make the ecosystems around the Aleutians more susceptible to ocean acidification. Brad Warren with the Sustainable Fisheries Partnership spoke about the issue at the Western Alaska Interdisciplinary Science Conference Thursday.

"It's a cross cutting threat to food webs that support fisheries. It affects the physiologies of many species in the marine system - gill function, reproduction, growth rates, blood chemistry, heart functions. The primary cause of death for fish exposed to high CO2 is heart attacks. It's really a wide band of effectors of harm."

Ocean acidification is caused by rising carbon dioxide levels in the atmosphere. It's absorbed into the ocean, which creates carbonic acid. That acid increases the pH of the ocean waters. The most obvious and best understood problem is its affect on calcification of shells. Warren said the acid corrodes the shells of large species, like crabs and oysters, but also the shells of smaller organisms that are important links in the food web.

"Many of the things that fish eat are experiencing conditions that may be fatal to them, particularly at early life stages," he explained. "If that's persistent for long enough, it's likely to cause recruitment problems in fisheries. Whether it has already caused them, no one knows. There's not enough information."

Preliminary research in the Bering Sea shows corrosive acid in all levels of the water column. Warren said it's unclear if the acidification is already causing problems, like the smaller fish some fishermen are reporting. This could be caused by many things there isn't enough research to say yet.

But Warren said it's important to stop the acidification and monitor its levels and effects on the ecosystem before it becomes a huge problem, because it's not something that can be fixed. "This is a change that takes geologic time to correct itself. There is no system for accelerating the ocean's return to a normal pH balance. And that balance is critical for much of the life support system for the fisheries that we depend upon."

Warren said that unlike thermal change, which could bring new species to the area, acidification could make the ocean inhospitable to all species. "This is fundamentally reducing the ocean's ability to make commercially harvestable quantities of the things we eat."

Commercial fisherman and Alaska Marine Conservation Council representative Alan Parks said that's why fishermen need to spread the word now and contact their leadership to protect their livelihoods.

"What we need to do is just think about it in terms of our legacy. What do we want our kids' opportunities to look like? We're at a point now where we can make a huge difference for the sustainability and the legacy that we leave behind."

You can learn more about ocean acidification by attending the free showing of A Sea Change at 8 pm Friday in the Makushin room at the Grand Aleutian. You can also attend a climate change information panel and teleconference with scientists from around the world at 10:30 am Saturday at the Grand.

OCEAN ACIDIFICATION'S IMPACT ON FISHERIES AND SOCIETIES: A U.S. PERSPECTIVE

BY SARAH R. COOLEY AND SCOTT C. DONEY

MANY VALUABLE COMMERCIAL FISHERIES AND AQUACULTURE FACILITIES

harvest ocean shellfish (e.g., clams, scallops) and crustaceans (e.g., lobsters, crabs) that form calcium carbonate shells. These animals, along with corals, may be particularly sensitive to changes in seawater chemistry driven by human fossil fuel use. Finfish may also be affected indirectly owing to loss of prey and habitat. Ocean acidification impacts could decrease future fishing revenues and harm communities that depend economically and culturally on marine resources.

In many parts of the United States, the word "seafood" is nearly synonymous with carbonate shell-forming marine species—shellfish like oysters, clams and scallops, and crustaceans like lobster, crabs, and shrimp. Adults and juveniles of these very economically valuable animals, along with less familiar shelled creatures like sea urchins, planktonic snails called pteropods, and some types of phytoplankton, are food for a variety of predators and fuel food webs. Commercial harvests of shellfish, crustaceans, and finfish sustain seafood industries that support many coastal economies. If ocean acidification slows the growth of marine organisms' carbonate shells and skeletons, it will endanger many individual plants and animals, whose declines will in turn harm entire marine food webs, aquatic environments, and economies (Doney et al. 2009).

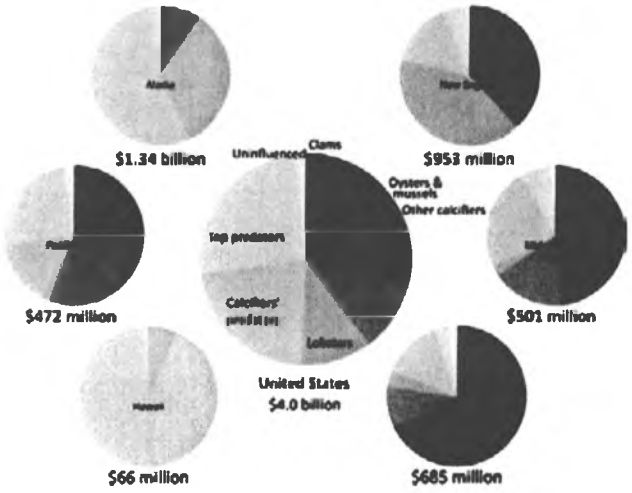


Figure 1. Primary revenue from U.S. commercial fishing (the amount paid to fisherman for the catch, sometimes called ex-vessel revenue) for the U.S. as a whole and broken up by region. Data are for 2006 from National Marine Fisheries Service statistics. The pie charts are divided into groups of species and the darker colors indicate those groups that are directly sensitive to ocean acidification, such as shellfish and crustaceans.

Recreational	Total economic impact (sales, income, jobs)	$82 billion
	Jobs supported	~530,000
Commercial	Primary sales (the amount paid to fishermen for catch)	$4 billion
	Retail seafood sales	$70 billion
	Net contribution to GNP	$35 billion

Table 1. Revenues from U.S. recreational (Gentner and Steinback 2008) and commercial (NMFS statistics) fishing (US dollars).

AN ECONOMIC ASSESSMENT OF U.S. COMMERCIAL FISHING AND AQUACULTURE

Commercial fishing is a big business today in the United States, and carbonate shell-forming species provide a large portion of its revenues. In 2006, the total value of commercial sales from fishermen to middlemen was $4.0 billion; shellfish and crustaceans provided 50% of that amount (Figure 1; Andrews et al. 2007). The contribution varies by region around the country (Figure 1); shellfish are more important in the New England and mid- to south Atlantic, crustaceans contribute greatly to New England and Gulf of Mexico fisheries, and predatory finfish (e.g. pollock, salmon, and tuna) dominate the Alaskan, Hawaiian, and Pacific-territory fisheries. Subsequent processing, wholesale, and distribution of all harvests generated retail sales of $70 billion in 2006, leading to $35 billion added to the U.S. gross national product that year (Table 1; Cooley and Doney, submitted).

Across the country, the number of jobs generated by U.S. commercial fisheries also grows markedly from catch to retail sale. The total number of jobs in the United States supported by commercial fishing is difficult to constrain, because industry

surveys do not count self-employed fishermen and may not count all middlemen. However, the efforts of a few fishermen support many jobs in seafood processing, transportation, preparation, and sales. Commercial fish processing and wholesaling nationwide supported about 70,000 jobs in 2006.

Recreational fishing also adds economic benefits because recreational fishermen travel, purchase permits and equipment, and patronize supporting industries (Figure 2). This results in the generation of jobs, profits, tax revenues, and business-to-business revenue. In 2006 (the latest date for which data is available), $24 billion of income, a total impact of $82 billion from sales and services, and almost 530,000 jobs (Table 1) were created in the United States by recreational saltwater fishing for a total economic impact of $82 billion that year (Gentner and Steinback 2008).



Figure 2. Saltwater recreational fishing is critical to local and regional economies throughout the United States (SE Alaskan waters pictured). The National Marine Fisheries Service estimates that 25 million saltwater anglers fished 127 million days in the coastal states of the U.S. in 2006.



Figure 3. The American lobster (*Homarus americanus*). Found along the Atlantic coast of North America, American lobsters live a solitary and largely nocturnal existence, feeding on crabs, mollusks, sea urchins, fish, and even macroalgae. Changes associated with ocean acidification may impact lobsters both directly since they use calcium carbonate to form their shells and indirectly through impacts to their food sources.

Growing aquaculture industries worldwide also depend heavily on carbonate-forming organisms like shellfish and crustaceans. In total, 20-25% of the global per capita human consumption of animal protein comes from marine harvests, but patterns of consumption vary widely, and developing and coastal nations often consume high per capita quantities of aquaculture products. In the United States, aquaculture generated $1 billion of primary sales in 2005 (Andrews et al. 2007), approximately 25% of the value of commercial wild fish harvests. Most aquaculture facilities are located in coastal areas, which will also experience ocean acidification.

	Species	pH	Shell dissolution	Increased mortality	Other
Mussel	*M. edulis*	7.1	yes	yes	25% decrease in calcification
Oyster	*C. gigas*	7.1	n/a	n/a	10% decrease in calcification
Giant scallop	*P. magellanicus*	< 8.0	n/a	n/a	Decrease in fertilization, development
Clam	*M. mercenaria*	7.0-7.2	yes	yes	
Crab	*N. puber*	6.0-8.0	yes	n/a	Lack of pH regulation
Sea urchin	*S. purpuratus*	6.2-7.3	yes	n/a	Lack of pH regulation
Dogfish	*S. canicula*	7.7	n/a	yes	
Sea bass	*D. labrax*	7.25	n/a	n/a	Reduced feeding

Table 2. Responses of commercially harvested species to laboratory ocean acidification experiments "n/a"—not available, response is unknown.

DIRECT CONSEQUENCES FOR SHELLFISH AND CRUSTACEANS

Although the full consequences of ocean acidification are not yet known for most commercially valuable species, trends for a few species (determined from laboratory studies) are alarming, indicating that the number and quality of many carbonate shell-forming species may decrease (Table 2; Doney et al. 2009). Because ocean acidification decreases seawater pH and carbonate saturation state, the carbonate shells of many marine plants and animals grow more slowly, or even shrink below certain pH and saturation state thresholds (Figure 3; see Guinotte and Fabry, this issue). The effects of acidification on juvenile marine organisms, however, are largely unknown; if acidification damages juveniles at a key developmental stage, entire populations could be threatened. One cause for concern is that many shellfish grow their juvenile shells from a more soluble form of carbonate and thus may be more susceptible to changes in chemistry. In the worst-case scenario, multiple recruitment failures could cause a population to collapse even if ocean chemistry remains in a range acceptable for adults. In other cases, carbonate-forming organisms that are able to maintain their shells and skeletons in acidified conditions may expend so much energy doing so that their reserves for survival and reproduction may become limited.

Protecting vulnerable marine organisms grown in aquaculture facilities from the effects of ocean acidification may be possible in theory, but it presents practical challenges. Aquaculture is often conducted in tanks or ponds on land that are filled with coastal seawater or within coastal ocean pens. Adjusting seawater chemistry before supplying culture tanks on land would require a great deal of equipment and monitoring that would dramatically increase the overhead of aquaculture operations. Aquacultured animals in nearshore pens cannot be shielded from ocean acidification.

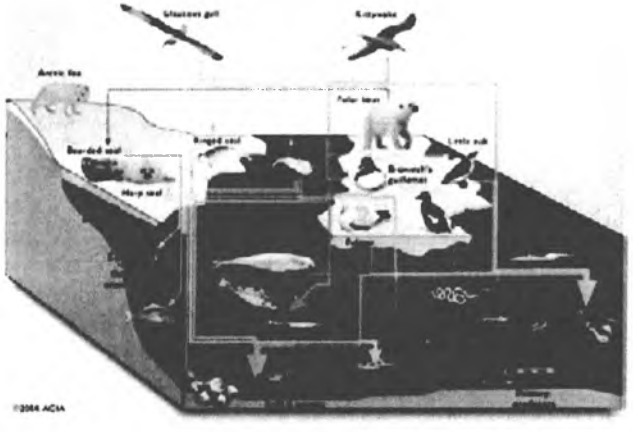


Figure 4. Trophic linkages in the Beaufort Sea. The food web of polar areas such as the Beaufort Sea demonstrates the complex interconnections that are at risk from ocean acidification. Because many Arctic animals depend either directly or indirectly on shellfish for food, reductions in the productivity of these waters due to ocean acidification and changing climatic conditions threaten the base of this and other marine ecosystems.

Laboratory experiments show that oysters and mussels' growth rates decrease and their calcification rates decline by 10% and 25%, respectively, in simulated future ocean conditions when atmospheric pCO_2 reaches 740 ppm, a level that would occur by about 2060 in seawater unless CO_2 emissions are controlled. If decreasing calcification rates observed in the laboratory cause comparable population losses in nature, a 10-25% decrease in all shellfish and crustacean harvests in 2006 would have decreased primary sales from U.S. commercial fisheries by $200-500 million (Cooley and Doney, submitted). In the future, economic losses will likely vary as marine ecosystems respond and adapt differently to acidification and as economic conditions change. Refining economic loss estimates requires knowing the responses of organisms to ocean acidification, the effects of adaptation or conservation measures enacted in the next 50 years, and the total economic consequences of fishing losses.

INDIRECT CONSEQUENCES FOR FISHERIES AND SOCIETIES

Beyond their direct commercial value, many calcifying species are located at the bottom or middle of the marine food web; therefore, the effects of ocean acidification will likely be transmitted throughout ecosystems by predator-prey relationships (Figure 4; Doney et al. 2009). Nearly all commercially harvested

ECONOMIC IMPACTS OF OCEAN ACIDIFICATION ON LOCAL ECONOMIES

Complicating the estimation of ocean acidification's broader economic effects is the difficulty in quantifying indirect links among marine ecosystems and regional economies. New Bedford, Massachusetts, is an example of a city that could be disproportionately affected by economic losses brought on by ocean acidification (Cooley and Doney, submitted). New Bedford has historically relied on fishing income and currently hosts a large scallop fleet. In 2006, New Bedford had the largest commercial fishing revenues of any single city, about $280 million in primary sales, almost all from shellfish. This region already has little economic resilience; 20% of its population fell below the poverty line in 1999, approximately twice the statewide (9%) and nationwide (11%) rates that year. In addition, the income gap separating the highest- and lowest-income families is growing at the sixth fastest rate nationwide. Fishery losses in a city like New Bedford could continue to alter its economy and demographics and further accelerate the income gap's development.

wild finfish species prey to some extent on shellfish and crustaceans or their predators. Depletion of calcifying prey would alter or remove traditional food sources and intensify competition among predators for remaining prey species. This indirect pressure would likely reduce harvests of commercially important predators at the same time ocean acidification would directly pressure populations via metabolic or reproductive stress. The overall impact of losing calcifiers on predator numbers is not well known, but the total ecosystem impact of ocean acidification will certainly depend on whether alternative prey species are available and whether predators can switch to prey species that are not affected by acidification.

Coral reef damage associated with ocean acidification will also indirectly pressure marine ecosystems by disrupting the feeding and reproduction of numerous reef-dependent species. Declines in commercially and/or ecologically important species could follow as a result of decreased recruitment or increased success of competitors. In addition to creating unique ecosystems, reefs generate income and economic development from fishing and recreational diving.

If losses of plankton and juvenile shellfish alter marine food webs and losses of coral reefs eliminate habitat, entire ecosystems can shift into entirely new configurations after a sudden disturbance pushes these stressed communities past an ecological "tipping point." This progression is well understood in coral reef ecosystems that have been chronically damaged by temperature or pathogens; ocean acidification is expected to cause similar harm. Continuously stressed reefs become less ecologically resilient, meaning that they are less able to return to a stable, diverse coral community after a disturbance like a storm. Reefs damaged by such short-term events often then become dominated by macroalgae, and species diversity decreases (Hoegh-Guldberg et al. 2007). Herbivores, which tend to be less commercially desirable than predatory reef species, populate the reef. Perturbed ecosystems like these damaged reefs have lower biodiversity, are more susceptible to further injury, and provide fewer ecological services for humans. The mechanisms and outcomes of ecosystem shifts in non-coral reef communities (e.g., estuaries or coastal habitats populated by carbonate-forming organisms) are not as well understood, but non-coral communities may also undergo similar major shifts if plankton and juvenile shellfish losses are significant.

Projecting the economic consequences of ocean acidification's impact on entire ecosystems is difficult because biological responses are not known for most species. We need to understand how finfish populations will respond in the future to possible larval damage, shifts in prey species and distributions, and coral reef habitat loss. Humans play an integral role in shaping marine ecosystems through commercial fishing methods and harvest levels, but the long-term value of these ecosystems depends on more than just the quantity of fish caught in each season. Degraded marine resources affect humans through a variety of environmental connections. Coral loss will expose low-lying coastline communities and diverse mangrove ecosystems to storm and wave damage, increasing the potential for economic and social disruption following severe weather events. Many coastal and island societies in the developing world depend heavily on marine fisheries and tourism, and they stand to suffer the most economically from the consequences of ocean acidification.

IMPLICATIONS FOR U.S. POLICY AND MANAGEMENT

Until ocean acidification can be mitigated through a global reorganization of the energy and transportation infrastructure, initial responses must target local and regional scales. Action items that would work to maintain sustainable marine resources include: 1) updating fishery management plans to anticipate acidification; 2) adopting ecosystem-based management plans; 3) identifying ecologically resilient areas; and 4) planning for the social and economic consequences of ocean acidification. These efforts do not require large amounts of capital and can be tailored regionally.

Research into ocean acidification's impacts on all life stages (larval, juvenile, adult) of vulnerable marine life is also essential and will allow fisheries to be managed holistically by incorporating species interactions, predator-prey relationships, and the effects of changing ocean chemistry. Fishery management models that include acidification and climate change parameters will help determine appropriate future harvest levels for many fisheries. The likelihood that complex secondary ecological effects will follow species-specific responses emphasizes the need for ecosystem-based management. Ecosystem-scale planning will be particularly useful in areas where fisheries are dominated by predatory finfish (e.g., U.S. Pacific regions). These areas will be particularly vulnerable to changes in keystone/prey species and benthic habitat degradation, which could multiply the net negative effects of acidification.

Implementation of ecosystem-based fishery management and conservation of non-commercial species will allow greater numbers of species to survive changes in ocean chemistry and the ensuing ecological shifts that are likely to occur. A reduction in fishing pressure and preventable environmental stressors (such as local pollution) should begin before ocean acidification's effects on marine resources become obvious. The consequences of a precautionary approach to fishery management could decrease revenues in the short term, but may in fact result in greater fish stocks and higher revenues over the long term. If fisheries are to be sustainable in the face of climate change, then fishery management plans must include indirect impacts on non-commercial prey species and vulnerable benthic habitats.

Finally, changes in fishery management methods in anticipation of ocean acidification can be implemented in a way that balances ecosystem and social objectives by decreasing some catches and increasing others. Catch reductions may require

temporary, regional, or permanent fishery closures in some areas. To maintain economic well-being in marine-resource-dependent communities during such a transition, managers can buy back fishing licenses and gear and provide job training. Increasing fishery capacity might involve encouraging multi-species fishing, developing new markets, minimizing waste, increasing aquaculture, or supporting research to select for species or strains that are less sensitive to altered seawater chemistry (Charles 2007). Mitigating the local economic effects of such a change will require temporary economic support to displaced individuals through re-education and job transitions.

A GLOBAL CHANGE WITH HUMAN CONSEQUENCES

Ocean acidification is a worldwide problem that is poised to affect multiple levels of society through our relationships with the marine environment. Dramatic declines in calcifying organisms and the commercially important species that feed on them are likely to accompany acidification, with substantial direct ecological and economic losses. Less clear are the indirect economic and social consequences of ocean acidification's effects on food webs and marine habitats. Middlemen, retailers, and consumers are all likely to experience secondary losses; the ways in which these groups experience and respond to ocean acidification will partly dictate the total economic and social costs to humans.

Policy changes designed to support marine conservation efforts in the face of ocean acidification must be initiated as soon as possible. Because of time lags in Earth's carbon system, the CO_2 that has already been released will continue to alter ocean chemistry throughout the foreseeable future. Earth has been slow to recover from past perturbations in the carbon system, and the biological changes associated with present-day ocean acidification will become more and more apparent over the coming decades. Economic effects of changing seawater chemistry will compound over time, beginning with losses of single species and culminating in entire ecosystem shifts. Reducing CO_2 emissions over the next few decades, despite the possibility of small up-front costs, could provide noticeable economic benefits over the next several generations.

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RESOURCES

National Marine Fisheries Service commercial fishing statistics: **http://www.st.nmfs.noaa.gov/st1/index.html**

PHOTO CREDITS

Figure and Table 1: Courtesy of Dr. Sarah Cooley

Figure 2: Courtesy of Dr. John Guinotte

Figure 3: Courtesy of NOAA's Undersea Research Program/ Office of Oceanic and Atmospheric Research

Figure 4: Courtesy of Arctic Climate Impacts Assessment (ACIA), *Impacts of a Warming Arctic: Arctic Climate Impact Assessment.* Cambridge University Press, 2007.

Table 2: Adapted from Fabry et al. 2008

OUSE COMMITTEE REPOR

(7)
Date Referred to Committee: January 21, 2011 **FURTHER REFERRALS: Resources**

Date of Committee Action: 2/23/12

The HOUSE SPECIAL COMMITTEE ON FISHERIES considered: **HJR 10**

HOUSE JOINT RESOLUTION NO. 10
Supporting expanded research concerning the detrimental effects of ocean acidification.
HJR 10-OCEAN ACIDIFICATION RESEARCH

Recommends it be replaced with [ ] HCS *or* [ ] CS for _____(_____)
For Senate Bills with new title: [ ] Technical Title [ ] New Title: HCR _____ **[ ] Same Title [ ] New Title**

[ ] attach amendments
[ ] add new referral to _____Committee
[ ] Letter of Intent_____Committee

List of Abbrev for Depts.:
ADM
CED
COR
CRT
EED
DEC
DFG
GOV
DHS
LWF
LAW
LEG
MVA
DNR
DPS
REV
DOT
UA

***NEW* FISCAL NOTES**
*FN# is assigned by Chief Clerk's Office

*FN#	List by Dept(s):	Fiscal	Indet.	Zero
1	LEG			✓

***PREVIOUS* FISCAL NOTES**

FN#	List by Dept(s):	Fiscal	Indet.	Zero

Signing with recommendations	Printed Last Name	DP	DNP	NR	AM
	Gaitt			X	
					X
	HERRON			X	
	Austerman	X			
Robert J. Miller	MILLER	X			
Chair: Steve M Thompson	THOMPSON	X			
Chair:					